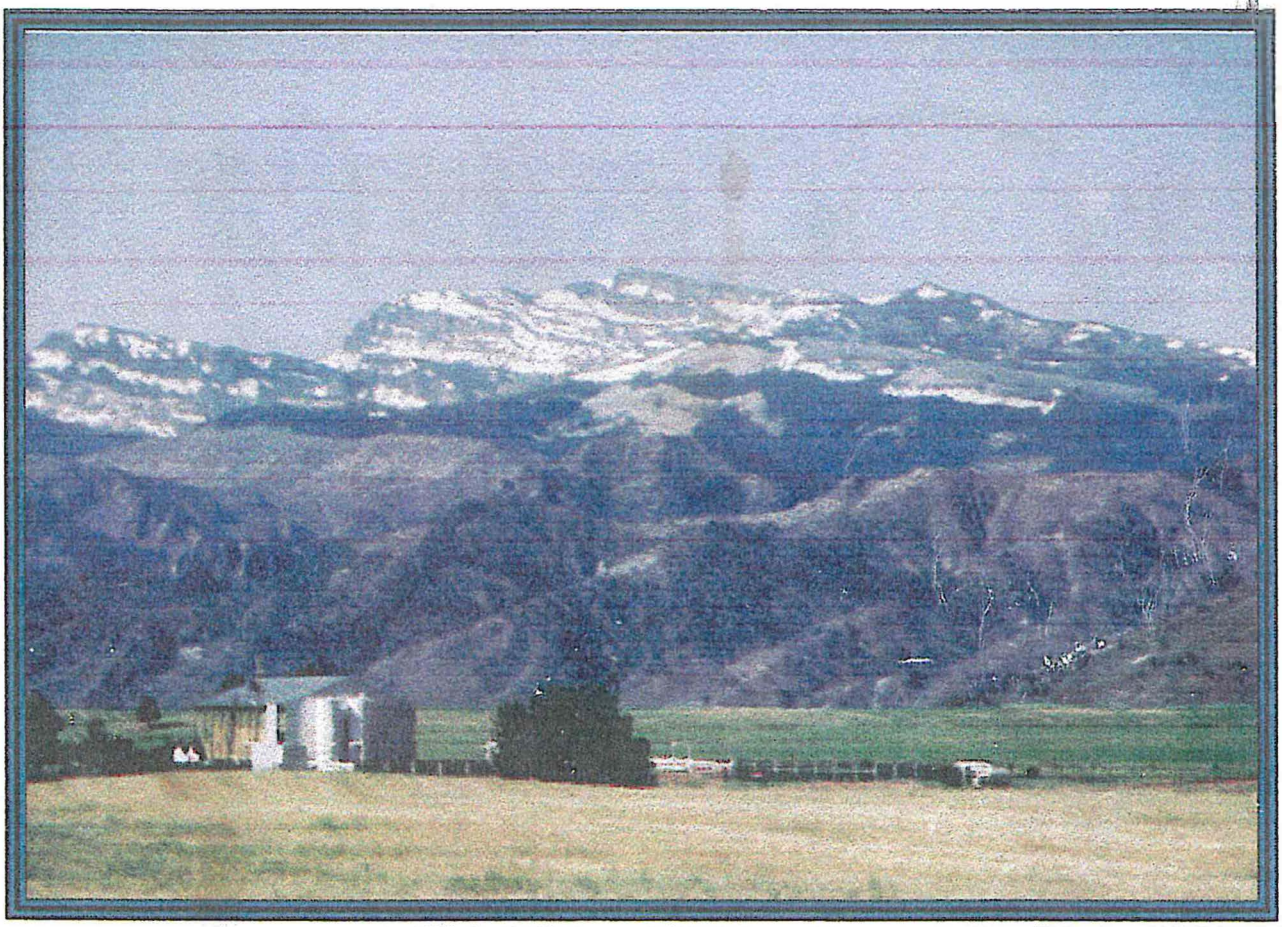
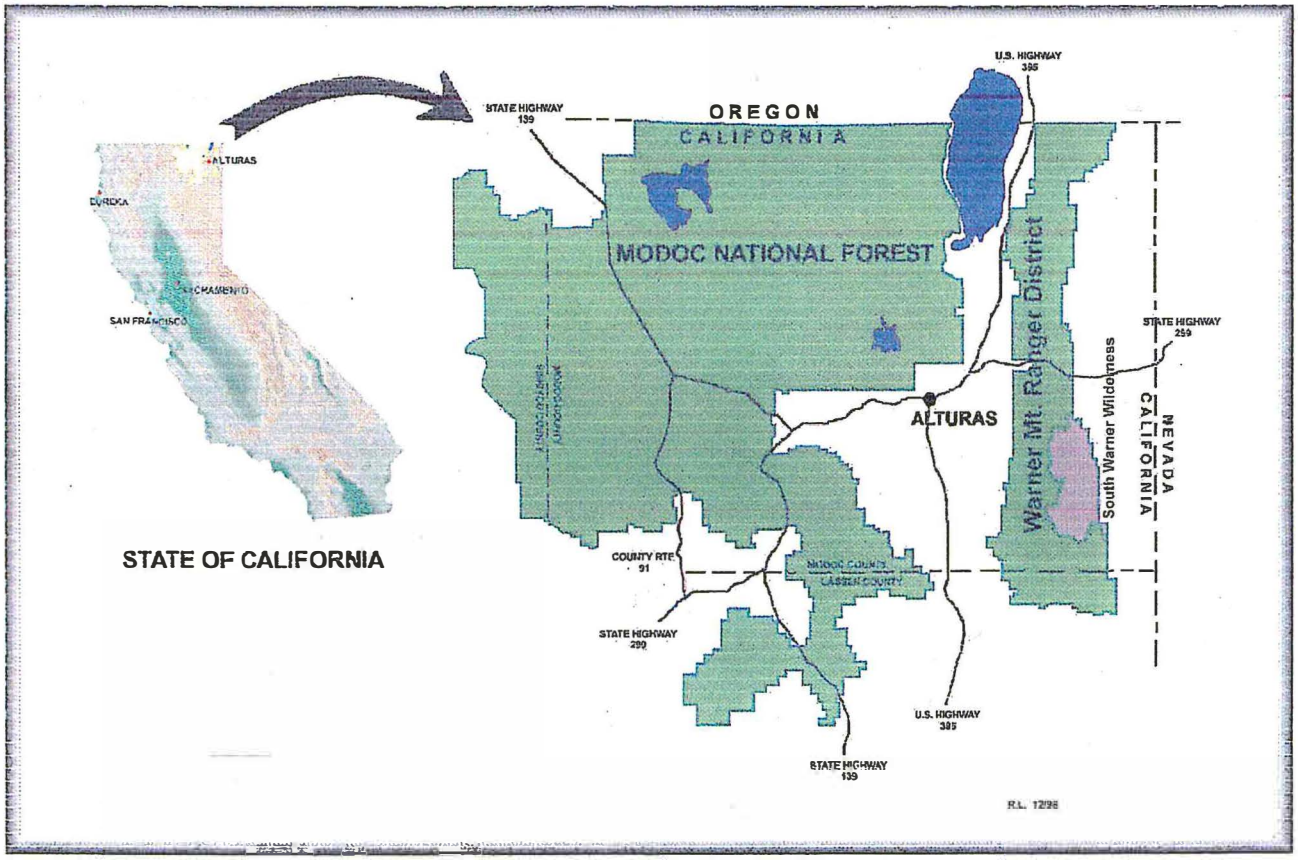
Warner Mountain Rangeland Project
Environmental Assessment



Warner Mountain Ranger District
Modoc National Forest

July 2000

VICINITY MAP
WARNER MOUNTAIN RANGELAND PROJECT
WARNER MOUNTAIN RANGER DISTRICT



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CHAPTER 1

PURPOSE AND NEED

INTRODUCTION

The ***Modoc National Forest Land and Resource Management Plan*** (***LRMP*** 1991) identified desired rangeland and watershed conditions for the Modoc National Forest. Significant progress has been made, however, current rangeland management on the Warner Mountain Ranger District is not moving rangeland and associated watershed resources towards these desired conditions at an appropriate rate. The purpose and need for the Warner Mountain Rangeland Project (WMRP) is to identify changes in rangeland and watershed management to achieve desired conditions in an appropriate timeframe, within legal, regulatory and Forest Service mandates. The Environmental Assessment for the WMRP analyzes alternatives for management of rangeland and permitted livestock on all 28 grazing allotments on the Warner Mountain Ranger District, covering approximately 350,000 acres. Term grazing permits on the Warner Mountain Ranger District currently include approximately 18,000 Head Months of cattle and 5,000 Head Months of sheep.

The WMRP landscape, i.e. the Warner Mountain Ranger District, essentially encompasses the Warner Mountains, which are identified as a distinct ecological subsection in ***Ecological Subregions of California*** (USDA 1997). The WMRP landscape rises from approximately 5,000 feet to almost 10,000 feet in elevation, and contains numerous subwatersheds flowing down from both sides of the north-south oriented mountain crest. Mean annual precipitation is about 20 to 30 inches.

The west half of the WMRP landscape forms the headwaters of, and major tributary to, the Pit River watershed. The Pit River provides approximately 20% of the total flow into the Sacramento River system. The Pit River is currently identified as an "impaired water body" by the State of California. Rangeland and watershed management included in the WMRP can make a significant contribution to water quality in the Pit River. The east half of the WMRP landscape forms the headwaters of a series of Great Basin lakes, which are also currently identified as "impaired" by the State of California. The WMRP will also influence the condition of these Great Basin lakes.

Vegetation in the WMRP landscape is characterized by a mosaic of forest and rangelands, including numerous montane meadows. The most common forest types are Ponderosa pine, Jeffrey pine, Mixed conifer, White fir, and Logdepole pine. Whitebark pine forests are common at higher elevations. Aspen stands occur across the landscape. Mountain mahogany stands are common, as are stands of Western juniper. Western juniper is also increasing in many of the upland shrub and grass communities. Most shrub communities are dominated by sagebrush species, however, bitterbrush and other shrub species are common.

About 150 years ago European settlers began to graze domestic livestock across the Warner Mountains. Today almost the entire landscape is covered by grazing permits. ***Sierra Nevada Ecosystems in the Presence of Livestock*** (USDA 1999), a report prepared by the Rangeland Science Team for the Pacific Southwest Station and Region, stated that the pressure of livestock grazing over the past century degraded conditions in some riparian habitats on the Warner Mountains. In addition, fire suppression over the past 50 years has allowed most of the shrub communities in the WMRP area to become decadent. This situation limits the abundance of high quality upland vegetation for wildlife as well as livestock, and contributes to wildfire severity potential.

MANAGEMENT DIRECTION

The ***LRMP*** provides extensive resource management direction to achieve desired rangeland and watershed conditions. The following ***LRMP*** direction is key to the WMRP:

- Through allotment management planning, manage rangeland vegetation to provide for healthy ecosystems; and to make forage available for livestock, wild horse herds, and wildlife species.
  - Maintain or enhance satisfactory ecological condition.
  - Implement cost-efficient range improvements.

- Balance permitted grazing and forage capacity by 2000 with grazing systems that complement other resource needs.

- Manage lakes, perennial reservoirs, meadows, seeps, springs and streamside management zones according to the Riparian Area Management Prescription and Appendices M, N, and T. Where uses conflict, favor protection of riparian-dependent resources over other resources.

- Restore degraded riparian areas through structural and nonstructural improvements. Structural improvements include gully control, stream-bank stabilization, and fencing. Nonstructural improvements include changes in grazing management.

- Manage aspen stands to achieve a mixture of different-aged stands. Manage aspen stands larger than ½ acre as distinct plant communities and special wildlife habitats.

- If naturally present, maintain representative seral stages within vegetation types including low sagebrush, big sagebrush, bitterbrush and mountain mahogany.

- Manage fuels to prevent fire and to complement other resource management direction.

- Use the Experimental Stewardship Program (1) to gain understanding of and support for resource management plans; and (2) to experiment with innovative approaches and incentives for improved rangeland management.

A number of major laws have direct application to the WMRP, such as the Clean Water Act. These laws are summarized in ***Appendix B***. In addition to these laws, completion of the WMRP specifically supports compliance with Section 504(a) of Public Law H.R. 1944, the 1995 Rescission Bill. Section 504(a) allowed the Forest Service to re-issue Term Grazing Permits in 1995/1996, while completing the necessary environmental analysis and documentation in subsequent years.

DESIRED CONDITIONS

As indicated above, programmatic Desired Conditions for the WMRP were derived from the ***LMRP*** and related laws. Through the WMRP planning process, site specific Desired Conditions were identified for each of the 28 grazing allotments on the Warner Mountain Ranger District. These site specific Desired Conditions, and the initial proposed action for each allotment, were developed by an interdisciplinary team of Forest Service resource specialists, in collaboration with livestock permittees, and a public working group sponsored by the Modoc/Washoe Experimental Stewardship Program, referred to as the Technical Review Team (TRT). Members of the TRT represented many different rangeland interests. This collaborative effort integrated Forest resource monitoring data,

the most current scientific information, experience gained from ***LRMP*** implementation on similar landscapes, as well as the significant experience base of the livestock permittees and TRT members. The TRT, public involvement, and alternative development for the WMRP, are more fully described in **CHAPTER 2**.

The need for the WMRP was driven by data showing that, although significant progress has been made, most riparian zones in the Project area are not at Desired Conditions, and under current management, will not move towards Desired Conditions at an appropriate rate based upon Forest monitoring and current scientific information. In addition, due to fire suppression activities in the past 50-100 years, many sagebrush, sagebrush/juniper, sagebrush/mahogany, and aspen communities are in decadent condition, or are being lost due to encroachment by juniper and other conifer species.

In **CHAPTER 3**, site specific locations that are focus areas for each of the 28 allotments are described, along with alternatives for rangeland and livestock management that address those site specific locations. During the WMRP planning process, an ecological classification system was developed to guide the identification of these site-specific locations. That ecological classification system is included as ***Appendix C – ECOLOGICAL CONDITION DESCRIPTIONS***. For the WMRP, the differences between existing and Desired Conditions that drove development of the proposed action, can be grouped into six areas, with Desired Conditions described below.

Riparian (Streams and Springs) are vegetative communities in which grasses, forbs, willows and other mesic hardwood species are dominant, and the species composition, arrangement and structure of the vegetation is primarily influenced by mostly saturated soils that are recharged continually by perennial streams, intermittent streams or springs that may flow on the surface throughout much or all of the year. The Desired Condition for these communities is that appropriate herbaceous and woody plant species (see ***Appendix C***) are present and result in high quality water, wildlife cover, and forage for both wildlife and livestock. Many perennial and intermittent streams and springs on the District have been identified as being in Satisfactory Ecological Condition, but only a few currently have the diversity of herbaceous and woody plant species necessary to be in Desired Condition.

Aspen are vegetative communities where aspen (*Populus tremuloides*) is dominant, and the composition, arrangement and structure of other plants are primarily influenced by moist soils (see ***Appendix C***). The Desired Condition for aspen dominated areas is, where capable, a multi-layered canopy, with aspen canopy closure $\geq$40%, and at least 500 stems per acre of vigorous aspen regeneration. Conifer canopy closure in these stands is $\leq$25%. Total canopy closure from sagebrush is less than 10%. Some aspen stands have been identified as being in Unsatisfactory Ecological Condition.

Seeps are vegetative communities in which grasses, forbs, willows and other mesic hardwood species are dominant, and the species composition and the arrangement and structure of the plants (see ***Appendix C***) is primarily influenced by mostly saturated soils that are recharged continually by groundwater discharge to the surface of the land. Seeps are distinguished from stream and spring vegetative communities in that there is no overland hydrologic continuity with watershed drainage systems. Seeps do not have issues of volume of flow, temperature and turbidity. The Desired Condition for seeps is that the accompanying vegetation provides a "sponge" effect and no fresh "hummocking" is present. There is a continuous vegetative mat of sedges and hydrophytic shrubs are common. Most seep areas are currently in Satisfactory Ecological Condition, but only a few currently have the diversity of herbaceous and woody plant species necessary to be in Desired Condition.

Upland rangelands are characterized by vegetative communities where grasses, forbs, shrubs, and juniper are dominant. Species composition, arrangement and structure of vegetation (see ***Appendix C***) are primarily influenced by well-drained soils that receive their recharge from snowmelt and summer rains. The Desired Condition for upland communities is for appropriate site-specific species composition, with individual plants well distributed, and adequate species regeneration. Currently, almost all upland communities are in Satisfactory Ecological Condition, but most are not at Desired Condition.

Threatened, Endangered or Sensitive Species (TES). The Desired Condition for Threatened and Endangered species is that recovery goals for these species are being attained, and for Sensitive species that habitat quality and quantity necessary for viable populations is maintained or improved, and that management does not contribute to a trend toward listing. There are seven TES species with habitat on the Warner Mountain Ranger District that have the potential to be affected by livestock grazing practices, and/or rangeland and watershed restoration activities such as prescribed fire. Of the seven TES, one species is Threatened: the Warner sucker (*Catostomus warnerensis*). Six species are Sensitive: Warner Valley redband trout (*Oncorhynchus mykiss pop 4*); Goose Lake redband trout (*Oncorhynchus mykiss pop 6*); willow flycatcher (*Empidonax trailii*); mountain lady slipper (*Cypripedium montanum*); green buckwheat (*Eriogonum umbellatum var. glaberrimum*); and ephemeral monkeyflower (*Mimulus evanescens*). More detailed information regarding TES species is provided in **CHAPTER 4**.

Range Management Program. The Desired Condition for the Range Management Program is for new grazing management decisions to be made by the year 2000 which bring permitted livestock grazing in balance with landscape capability, using grazing systems that compliment other resource needs, across the entire Warner Mountain Ranger District. These new decisions will result in permitted livestock management which is sustainable and contributes to the community economy. Currently, there are areas on the District where permitted livestock management is not in balance with landscape capability and is not facilitating movement towards the Desired Condition of the vegetative communities and TES species described above.

OPPORTUNITIES

The alternatives being analyzed and the decisions to be made in the WMRP for allotment management, and rangeland and watershed restoration, provide opportunities to restore or enhance:

- 103 miles of habitat for Goose Lake redband trout
- 3 miles of habitat for Warner sucker and Warner Valley redband trout
- 10,800 acres of riparian ecosytems
- 1,260 acres of aspen ecosystems
- 17, 993 upland ecosystems

CHAPTER 2

PUBLIC INVOLVEMENT and ALTERNATIVE DEVELOPMENT

PUBLIC INVOLVEMENT

Public Workshop

Public involvement on the WMRP began with a public workshop held February 16, 1999 in Cedarville, CA. The purpose of the workshop was to inform interested publics about the Project, and to illicit their input regarding areas of focus for the Project.

A public invitation to the workshop was published on January 14, 1999, in *The Modoc County Record*, the newspaper of record for the Modoc National Forest. In addition, on January 26, 1999, letters of invitation were mailed to 171 individuals and/or organizations that were considered potentially affected interests (PAIs). These PAIs included private citizens, local, state and federal agencies, Native American tribes and many different organizations who had indicated an interest in resource management on the Modoc National Forest. The letters also provided information on other means of public involvement for persons unable to attend the workshop. On February 11, 1999 a second public invitation to the workshop was published in *The Modoc County Record.*

The workshop held on February 16, 1999, was attended by 35 persons. The themes most commonly expressed by attendees at the workshop were:

- Make the decisions workable, durable and flexible, so we don't have to continually replan.
- Be site-specific.
- Don't cause any decreases in AUMs (Animal Unit Months) of grazing.
- The Forest Service should manage vegetation with treatments such as prescribed burning, thinning white fir trees, and removing junipers, to create additional forage opportunities.

Numerous other individual comments were expressed. Complete responses of workshop attendees are presented in ***Appendix G.***

In addition to workshop attendees, 22 persons who received invitation letters to the workshop, responded that they could not attend the workshop, but wanted to be retained on the Project mailing list for future contact. Four of those persons also submitted written comments. One respondent was concerned with the effects that the Project could have on ownership rights and management options available to private landowners within the Warner Mountain Ranger District. The second respondent was concerned with the procedural difficulties of completing and implementing such a large-scale project. The third respondent was concerned with a wide range of environmental and economic effects mostly related to vegetative conditions. The fourth respondent was concerned that the Project display the differences in effects between sheep grazing and cattle grazing.

A person who had not been on the workshop Project PAI list, but had seen the workshop invitation letter, wrote and asked to be placed on the Project mailing list for future contact. In addition, the individual suggested several other groups of persons who might also be potentially affected interests. That individual, as well as the suggested others, were added to the Project mailing list for future contacts. Several persons also wrote in response to the public workshop invitations published in *The Modoc County Record*, and asked to be included on the mailing list, which was done.

Public Working Group

To assist in developing a Proposed Action for the WMRP, and consistent with the Modoc ***LRMP,*** the Responsible Officials decided to utilize a public working group process with a proven record of successful collaboration. The Modoc-Washoe Experimental Stewardship Program has helped resolve resource management situations on the Warner Mountain Ranger District since the Program was authorized in 1979, in accordance with the Public Rangeland Improvement Act (1978).

In February 2, 1999, the Experimental Stewardship Program Steering Committee approved the formation of a public working group referred to as the WMRP Technical Review Team (TRT). The composition of the TRT was designed to provide representation from a wide variety of interests. The TRT included representation from the Modoc County Board of Supervisors, California Department of Fish and Game, California Department of Forestry, California Mule Deer Association, Society for Range Management, Natural Resources Conservation Service, University of California Cooperative Extension, the Warner Mountain Permittee Association, and a representative from the Modoc National Forest. In addition, the California Wilderness Coalition, the Klamath Forest Alliance, private individuals, and Native American Tribes contributed to the collaborative effort.

The TRT met jointly with the Forest Service interdisciplinary team and grazing permittees for 14 full working day sessions. The TRT operated by consensus. In their work sessions, the TRT carefully reviewed and debated information on existing and desired conditions for each of the 28 grazing allotments. Through consensus, the TRT established desired condition criteria and areas of focus. Then the TRT developed, again through consensus, a Proposed Action for the Project which included various combinations of grazing systems, utilization standards, allotment boundary adjustments, range improvements, and rangeland restoration activities, for each of the 28 allotments. With minor changes to the TRTs work, the Experimental Stewardship Program Steering Committee formally recommended the Proposed Action for the WMRP on July 22, 1999.

Scoping of the Proposed Action

On August 26, 1999, a Scoping Notice was published in *The Modoc County Record*. The Scoping Notice briefly described the Proposed Action, how to submit scoping comments, and how to obtain a ***Summary of the Proposed Action***. On August 27, 1999, a Scoping Notice and ***Summary of the Proposed Action*** was mailed to 85 interested parties; including permittees, local, state and federal government organizations, Native American tribes, non-governmental organizations and those individuals who had indicated an interest in being on the Project mailing list. The ***Summary of the Proposed Action*** (13 pp.) identified the WMRP livestock grazing allotments and included a map showing their locations, described the Proposed Action and the decisions to be made, included a specific request for public comment, and a form to request additional informational material.

In addition to the newspaper scoping notice and the individual mailings, the Forest Service prepared a "Powerpoint" (computer-slides) presentation describing the Proposed Action and the process used to develop that Proposed Action. The Forest Service offered to present the slide show to many groups identified as potentially affected interests, representing a diverse variety of interests. All requests for the Powerpoint presentation were honored. The following groups requested and were presented with the Powerpoint presentation: the Modoc County Board of Supervisors; the Modoc County Land Use Committee, the Modoc County Farm Bureau, and the Modoc County Cattlemen's Association. In addition, the Proposed Action was presented to the Fort Bidwell Tribal Council, which expressed no concerns with the Proposed Action. None of the other Native American Tribal contacts responded to the request for comments on the Proposed Action.

Issues Raised Through Scoping

In response to public scoping, 23 individuals and/or organizations provided comments regarding the Proposed Action. The Forest Service Interdisciplinary Team carefully considered the scoping comments received, and grouped the significant issues raised regarding the Proposed Action into eight issue areas, summarized below.

Seeps and Springs

1. The term "Seeps & Springs" should be more clearly defined,
    - Differentiate between streamside riparian zones and seeps and springs
    - Differentiate between seeps & springs by ecological function
2. Be site specific regarding proposed management actions for seeps and springs
3. Fully describe economic effects of management proposals for seep and springs
4. Fully describe proposed monitoring strategies for seeps and springs

Economics

1. The proposed Utilization Standards for Seeps & Springs and Riparian Herbaceous use make operation of allotment economically infeasible for some Permittees
2. A thorough economic analysis needs to be completed, evaluating
    - Feasibility for Permittees
    - Effects to Modoc County, both government and local economy
    - Cost-effectivess to taxpayers

Riparian

1. Interim Forest Land and Resource Plan utilization standards are moving the land towards the Desired Condition, so why implement more restrictive standards?
2. Make clear distinction between riparian zones and seeps & springs
3. Display the science for:
    - Streamcourse ecological condition ratings
    - How utilization standards proposed relate to ecological conditions and grazing systems

Monitoring

1. Question credibility of Permittee self-monitoring
2. Question ability of Forest Service to complete all monitoring proposed

Wilderness

1. Grazing in Wilderness is not compatible with other Wilderness values
2. The timing and intensity of sheep grazing in the Wilderness needs to be changed
3. Grazing Allotments in the Wilderness should not be expanded

4. The effects of sheep grazing on aspen stands needs to be considered
5. Grazing Allotment boundaries near western boundary of Wilderness need to be considered for relocation
6. Question proposal to treat aspen stands in Wilderness

Allotment Specific
1. Proposal from one Permittee to consider a significantly different alternative for their allotment
2. Reconsider positive control of livestock problems within and between certain allotments
3. Small refinements requested to Proposed Action

Process
1. Ensure Permittees have maximum flexibility to propose alternatives within NEPA timeframes
2. Request that an "economic impact statement" be prepared instead of an environmental assessment

Adaptive Management
1. Concern that proposed Utilization Standards will prohibit "Adaptive Management"
2. Clearly define adaptive management
3. Need to be able to adjust management in a timely manner to respond to changes in conditions

Modoc County Cooperating Agency Status

During the scoping process, the Modoc County Board of Supervisors requested Cooperating Agency status for Modoc County in the development of the analysis of economic effects for the WMRP. Under the National Environmental Policy Act and the Code of Federal Regulations, this status can be granted when the requestor has special expertise not available to the Lead Agency (Modoc National Forest). However, the Forest Service, as Lead Agency, would retain final approval of the analysis. Modoc County was granted Cooperating Agency Status for development of the analysis of economic effects of the WMRP, specifically to draw on their expertise on effects on the economy of Modoc County. Representatives of the County and the Forest worked together to review current local and national economic analysis tools, and successfully reached consensus on appropriate parameters to be used in the WMRP analysis.

ALTERNATIVE DEVELOPMENT

Alternatives Considered in Detail

The eight issue areas identified through public scoping of the Proposed Action were addressed in one or more of the alternatives analyzed in detail in this Environmental Assessment and two of the issue areas were added to the analysis as focus areas: Wilderness and Economics.

The alternatives which are analyzed in detail in the analysis are: the **No Grazing Alternative** (developed for 28 allotments); the **Current Management Alternative** (developed for 28 allotments); the **Stewardship Alternative** (developed for 28 allotments); the **Wilderness Sheep Adaptive Management Alternative** (developed for 3 allotments); and the **Bald Mountain Permittee Alternative** (developed for 1 allotment). The Current Management Alternative is considered the "no action" alternative, i.e. no change from current management, and is included as required by the Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR 1502.14(d)). Key features of these alternatives are highlighted below. More detailed descriptions of the alternatives by allotment are presented in **CHAPTER 3**.

No Grazing Alternative (28 allotments):

This alternative assumes that the Forest modifies term grazing permits on the Warner Mountain Ranger District to suspend domestic livestock grazing under those permits for the next 10 years.

Current Management Alternative (28 allotments):

This alternative assumes that the grazing systems, utilization standards, allotment boundaries, range improvements, and rangeland restoration activities currently authorized on the Warner Mountain Ranger District would be reauthorized for the next 10 years without change.

Stewardship Alternative (28 allotments):

This alternative reflects the Proposed Action developed by the Experimental Stewardship Program with appropriate minor modifications based upon public scoping comments.

Wilderness Sheep Adaptive Management Alternative (3 allotments):

This alternative reflects significant new resource condition data acquired after the Proposed Action was circulated for public scoping. This new data resulted in the development of an alternative which was significantly different from the Stewardship Alternative for the Wilderness Sheep Allotments, as the Stewardship Alternative includes only minor modifications of the Proposed Action. The Wilderness Sheep Adaptive Management Alternative was developed in a collaborative effort between the Forest Service and the grazing permittee.

Bald Mountain Permittee Alternative (1 allotment):

One permittee requested that the Agency analyze an alternative developed by the permittee. That alternative is included in the WMRP analysis.

Alternatives Not Considered in Detail

The alternatives analyzed in detail in this Environmental Assessment were identified as appropriate and sufficient to respond to the issues raised regarding the Proposed Action during public scoping, as well as Agency environmental analysis direction. However, during the planning process variations of these alternatives were considered and dismissed from further detailed analysis. The key features of these alternatives and a brief discussion of why they were dismissed from detailed consideration are highlighted below.

(a) An alternative with higher grazing levels and less restrictive utilization standards than the Current Management Alternative, with or without construction of any new range improvements. This alternative might be more responsive to the need to maintain the economic viability of local communities than the Current Management Alternative, but would be non-responsive to the need to advance existing resource conditions towards Desired Conditions at an appropriate rate.

(b) An alternative with the grazing levels and more restrictive utilization standards included in the Stewardship Alternative, but without construction of any new range improvements. While achieving advances in resource conditions at an appropriate rate, this alternative would be significantly less responsive than the Stewardship Alternative to the need to maintain the economic viability of local communities.

(c) An alternative with the grazing levels and utilization standards included in the Current Management Alternative, but including new range improvements. This alternative is more responsive than the Stewardship Alternative to the need to maintain the economic viability of local communities, but would be non-responsive to the need to advance existing resource conditions towards Desired Conditions at an appropriate rate.

CHAPTER 3

DESCRIPTION OF ALTERNATIVES

INTRODUCTION

For each of the 28 allotments on the Warner Mountain Ranger District at least three Alternatives will be described in this Chapter: the **Current Management Alternative**, the **Stewardship Alternative**, and the **No Grazing Alternative**. For the three South Warner Wilderness Sheep Allotments, a fourth Alternative is described: the **Wilderness Sheep Adaptive Management Alternative**. For one allotment, a fourth Alternative submitted by a permittee is described: the **Bald Mountain Permittee Alternative.**

Management of rangelands, and management of livestock grazing, can include some or all of the following activities:

- Rangeland Vegetation Restoration
- Stream Restoration
- Grazing Systems, including Timing and Intensity of Grazing
- Utilization Standards
- Herding Strategies
- Range Improvements (fences, water developments, cattleguards)
- Allotment Boundary Adjustments
- Monitoring
- Adaptive Management

A ***GLOSSARY*** with explanations of each of these activities is provided in ***Appendix A***.

As described in **CHAPTERS 1** and **2**, conditions driving the purpose and need for the WMRP are grouped into eight focus areas: Riparian (Streams and Springs); Aspen; Seeps; Upland; Threatened, Endangered and Sensitive Species; Range Management Program; Wilderness; and Economics. Each of the Alternatives described in this chapter includes a variety of management activities which will affect site condition and trend in one or more of these eight focus areas.

Each allotment description includes the following three sections: **Focus Areas**, **Table of Management Practices by Alternative**, and **Management Practices Map**. Most allotment descriptions also include a fourth section: **Additional Information**. Each of the allotment **Management Practices Maps** displays relevant existing condition information, and proposed management practices, for the **Current Management**, **Stewardship** and **No Grazing Alternatives.**

For each allotment, only those site specific conditions which are driving the need to change rangeland management on that allotment are identified in the section on Focus Areas. Rangeland resource conditions on the remainder of the allotment, not identified under a **Focus Area,** are considered to be in satisfactory condition, with current rangeland management allowing for movement towards desired conditions at an appropriate rate.

For the **Stewardship Alternative,** a **Monitoring Plan** was developed that would apply to each allotment under the **Stewardship Alternative**. This **Monitoring Plan** is included as ***Appendix D***.

The analysis of cumulative effects of Alternatives is presented in **CHAPTER 4**.

BALD MOUNTAIN ALLOTMENT

Four Alternatives are described for the Bald Mountain Allotment: **Current Management** (No Action); **Stewardship**; **No Grazing**; and the **Permittee Alternative**. Forest Service direction generated inclusion of the **Current Management, No Grazing** and **Stewardship Alternatives**. The **Permittee Alternative** was developed, and submitted for inclusion, by a Bald Mountain permittee. The permittee's submission, less attachments, appears in ***Appendix F***. The complete permitee submission is available at the District Office.

FOCUS AREAS

Riparian (Streams and Springs):

Stream reach 181 - Unsatisfactory/Functioning at Risk - This is Mill Creek. This stream reach exhibits less than the desired vegetative component with less than 3 hardwood species present.

Spring area BM-15 - Unsatisfactory/Functioning at Risk - This spring area is the headwaters of Mill Creek. This spring exhibits very little of the desired vegetative component and recent hummocking is present.

Spring area BM-16 - Unsatisfactory/Functioning at Risk - This spring area is the headwaters of the South Fork of Mill Creek. This spring exhibits very little of the desired vegetative component and recent hummocking is present.

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Aspen:

Aspen BM-7 – Unsatisfactory/Non-Functioning - This is an aspen stand at the headwaters of Mill Creek. Stand exhibits very little regeneration and is being dominated by conifers.

Aspen BMR-2 – Unsatisfactory/Non-Functioning - This is an aspen stand at the headwaters of Mill Creek. Stand exhibits very little regeneration and is being dominated by conifers.

Upland:

Sagebrush BM-8a - Satisfactory/Not at Desired Condition due to the decadent condition of the sagebrush, which is suppressing the expression of other desired vegetation and increasing wildfire severity potential. Lack of fire is the primary cause of the sagebrush condition.

Economics:

Unsatisfactory permittee costs to achieve effective livestock distribution and maintain positive control within the allotment.

ADDITIONAL INFORMATION

Rangeland Vegetation Restoration

Under the **Stewardship** and **No Grazing Alternatives,** the conifers invading Aspen areas BM-7 and BMR-2, which are less than 22 inches in diameter, will be removed, followed by management ignited prescribed fire. After the fire, BM-7 will be fenced, including a cattleguard, until young aspen are established. All applicable Best Management Practices will be followed during treatment.

Under the **Stewardship** and **No Grazing Alternatives,** the decadent sagebrush in Upland area BM-8a will be treated with prescribed management ignited fire, followed by two growing seasons of rest from livestock grazing to allow re-establishment of the desired forbs and grass vegetation. All applicable Best Management Practices will be followed during treatment.

Grazing Systems

The Bald Mountain **Table of Management Practices** shows that under the **Current Management** and **Stewardship Alternatives**, the term grazing permits on Bald Mountain Allotment would cover 231 cow/calf pairs, from 5/16 to 9/30, which under standard calculation equates to *1,027 Head Months (HM)*. Under the **Permitee Alternative,** the term grazing permits would cover 181 cow/calf pairs and 1000 ewes with lambs, which under standard calculation equates to *1,695 HM*. The **Permitee Alternative** states: "The Bald Mountain Allotment Alternative suggests a trade off of 50 cattle for 250 sheep as far as forage consumption is concerned. The alternative considers that the other 750 sheep to make up a band will derive their forage from forage areas not used by cattle and forage plants not favored by cattle within the allotment and from forage areas outside of the allotment. Areas outside the allotment would be Cedar Canyon and Davis Creek or other places needing vegetative manipulation." (***Bald Mountain Alternative***, 2/11/00, p. 6)

Utilization Standards

The **Permittee Alternative** proposes no utilization standards be applied on the Bald Mountain Allotment, except for a stubble height standard of 4 inches, to be applied to C and D Rosgen Type streams. The permittee states: "Monitoring is a function of management, however, arbitrary blanket standards and guides for monitoring as proposed in the Warner Mountain Rangeland Project [Stewardship Alternative] are to address general management of administration as would be found on category C allotments. The Modoc Forest Plan has designated Bald Mountain Allotment as a category D allotment therefore we need to use a higher level of planning and management....The Bald Mountain Allotment Alternative differs in that it would be less dependent on short term monitoring (i.e. utilization standards) and go direct to monitoring the desired goals such as water temperature and turbidity." (***Bald Mountain Alternative***, 2/11/00, pp. 6, 8)

Allotment Boundary Adjustments

The **Stewardship Alternative** includes three allotment boundary adjustments for Bald Mountain Allotment, as displayed in **TABLE 3-1** and on the **Bald Mountain Management Practices Map**. Two of these adjustments affect the boundary between Bald Mountain and Davis Creek. The third adjustment affects the boundary between Bald Mountain and Thoms Creek Allotment. All of these adjustments facilitate cost-effective positive control of livestock.

In addition to the boundary adjustments included in the **Stewardship Alternative**, the **Permittee Alternative** adds two additional boundary adjustments. These additional boundary adjustments are displayed on the **Bald Mountain Permitee Alternative Map**. The **Permittee Alternative** states (p. 2):

BOUNDRY CHANGES

1. East of Stough Camp ground – move and rebuild existing fence to the east side of spring identified as a concern on Cedar Canyon Allotment (sec.27) and develop a water trough on the Bald Mountain side. ...

2. Thoms Creek by the present boundry as it exists, (& as agreed upon by Betty Brown, K.C. Bordwell, and Ray Page in the summer of 1999), is not a boundry that cattle will adhere to because it runs down the middle of a watershed in a basin common to both allotments. If in fact drift within the Joseph Creek Basin is unacceptable by the Forest Service, then a logical fence location needs to be sought. When considering the whole of both allotments this is probabaly low on the list of solvable problems.

Monitoring

The **Permittee Alternative** incorporates the use of an ***Analysis (Thought Process) Work Sheet***. The **Permitee Alternative** states: "The Bald Mountain Plan will address monitoring site specifically for each objective worksheet. ...Short term monitoring will be done to satisfy the measurement statement in the objective worksheets. This will be done as outlined in the objective worksheet. ...On Rosgen type C and D streams 4" of stubble height will be left on the creek at the end of the season to trap sediment, however, if areas of greater utilization are found repeatedly, adaptive management will be used rather than livestock reduction as a means to solve the problem." (***Bald Mountain Alternative***, 2/11/00, p.6)

TABLE 3-1
Bald Mountain Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative	Permittee Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, May 2000, Decision Notice, July 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, May 2000,Decision Notice, July 2000*
Grazing Strategies			Non-Use for Resource Protection	
Boundaries	*See Bald Mountain Management Practices Map*	*See Bald Mountain Management Practices Map - Minor boundary adjustment in the vicinity of Cedar Mtn. (BM-9). Move northwestern boundary with Davis Creek Allotment north to facilitate fence construction (DC-15/BM-14). Move northeastern boundary with Davis Creek Allotment to existing fence.*		*See Bald Mountain Permitee Alternative Map - Minor boundary adjustment in the vicinity of Cedar Mtn. (BM-9). Move northwestern boundary with Davis Creek Allotment north to facilitate fence construction (DC-15/BM-14). Move northeastern boundary with Davis Creek Allotment to existing fence. Move boundary with Thoms Creek so that Joseph Creek Basin is not divided. (BMR-4) Move fence Between Cedar Canyon & Bald Mtn. toward spring area east of Stough and develop spring with trough on Bald Mtn. Side. Extend fence to powerline road on north side of Hwy299.*
Grazing System	*6 Deferred pastures, 3 of them irrigated (BM-12). One of the 3 is rested annually*	*10 Deferred pastures, 3 of them irrigated (BM-12). All 3 will be used in the fall for gathering, Benton Meadows pasture will be used for fall gathering*		*10 Deferred pastures, 3 of them irrigated (BM-12). All 3 will be used in the fall for gathering, Benton Meadows pasture will be used for fall gathering*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative	Permittee Alternative
Grazing Strategies *cont.*				
Numbers & Season	*231 cow/calf pairs from 5/16 to 9/30*	*231 cow/calf pairs from 5/16 to 9/30*		*181 cow/calf pairs from 5/16 to 9/30. Some pairs return home early because of hunting season. Remaining pairs will remain on the allotment later than 9/30, for enough days to make up the HM lost by cows coming home early. 1,000 ewe/lamb pairs from 5/16 to 9/30.*
Total Head Months	*1,027 HM Cattle*	*1,027 HM Cattle*		*805 HM Cattle 4,450 HM Sheep (Total 1,695 HM of "cattle equivalent")*
Utilization Standards			*NONE*	
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*		*Herbaceous – NA%* *Browse - NA %*
Riparian		***Streamreach 181*** *Herbaceous – 35%* *Browse - 20%* *Streambank – 20%* *Stubble-height-5"* ***Spring areas (BM-15 & 16)*** *Herbaceous – 35%* *Browse - 20%* *Stubble-height- 5"*		***Streamreach 181 & all other eastside streams*** *Herbaceous – NA %* *Browse - NA %* *Streambank – NA %* *Stubble-height- NA* ***Spring areas (BM-15 & 16)*** *Herbaceous – NA %* *Browse - NA %* *Stubble-height-NA*
	All other riparian *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***All other riparian*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*		***All C and D streams*** *Herbaceous – NA %* *Browse - NA %* *Streambank – NA %* *Stubble-height- 4"*
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*		*Herbaceous – NA%* *Browse - NA %*
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*		*Herbaceous – NA%* *Browse - NA %*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative	Permittee Alternative
Vegetation Restoration				
Aspen	*NONE*	*40 acres (BM-7) remove conifers, burn, fence w/cattleguard. 80 acres (BMR-2) remove conifers, burn*	*40 acres (BM-7) remove conifers, burn, fence w/cattleguard. 80 acres (BMR-2) remove conifers, burn*	*40 acres (BM-7) remove conifers, burn, fence w/cattleguard. 80 acres (BMR-2) remove conifers, burn*
Sagebrush	*NONE*	289 acres (BM-8a) burn	289 acres (BM-8a) burn	289 acres (BM-8a) burn
Stream Restoration	*NONE*	*NONE*	*NONE*	*NONE*
Range Improvements				
Fence Construction	*NONE*	*8.60 miles (BM-3, BM-4, BM-6, BM-14a, DC14/BM-13 & DC-15/BM-14, BMR-3 & CC-11)*	*NONE*	*8.60 miles (BM-3, BM-4, BM-6, BM-14a, DC14/BM-13 & DC-15/BM-14, BMR-3 & CC-11); 2 miles (BMR-5)*
Water Developments	*NONE*	*6 (BM-8b, BM-8c, BM-8d)*	*NONE*	*7 (BM-8b, BM-8c, BM-8d, BMR-5)*
Herding Facilitation	*NONE*	*5 Holding fields (BM-10, BMR-1) (3.75 miles)*	*NONE*	*5 Holding fields (BM-10, BMR-1) (3.75 miles)*
Permittee Actions				
Fence Maintenance	*15.25 miles*	*27.60 miles*	*15.25 miles*	*29.60 miles*
Water Source Maintenance	*4*	*10*	*4*	*11*
Ditch Maintenance	*2.0 miles*	*2.0 miles*	*2.0 miles*	*2.0 miles*
Monitoring:				
Annual (implementation);	*High Priority, key areas on this allotment will be monitored using full measurement or ocular estimates*	*A minimum number of key areas will be monitored by full measurement.*	*NONE*	*NONE*
Long-term (effectiveness)	*NONE*	*Minimum of 1 benchmark in this Allotment*	*NONE*	*NONE*
Annual water monitoring	*NONE*	*NONE*	*NONE*	*Annually monitor water temperature and turbidity*

BEAR CAMP ALLOTMENT

Three Alternatives are described for the Bear Camp Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

In 1995, an *Environmental Assessment for the Bear Camp Cattle & Horse and Selic Sheep & Goat Allotment Management Plans* was completed and Decision Notice signed. Many of the actions included in the 1995 Decision have already been implemented, and are included as existing improvements on the **Bear Camp Management Practices Map.** Some of the actions included in the 1995 Decision have not yet been implemented, and are included as proposed activities for both the **Current Management** and **Stewardship Alternatives** in the **Table of Management Practices by Alternative,** and on the **Management Practices Map.**

FOCUS AREAS

Riparian (Streams and Springs):

Stream reach 271 & 272 - Unsatisfactory/Properly Functioning – These stream reaches are East Creek. These stream reaches exhibit very little of the desired vegetative component with less than 3 hardwood species present and water temperatures in excess of 70 degrees Fahrenheit.

Stream reach 273 - Unsatisfactory/Functioning at Risk – This stream reach is the South Fork of East Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present and width-to-depth ratios greater than 12.

Stream reach 281 - Unsatisfactory/Functioning at Risk – This stream reach is Mosquito Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present and water temperatures in excess of 70 degrees Fahrenheit.

Stream reach 291 - Unsatisfactory/Properly Functioning – This stream reach is upper East Creek. This stream reach exhibits less than the desired vegetative component with less than 3 hardwood species present.

Spring area BR-16 - Unsatisfactory/Functioning at Risk – This spring area in Patterson Meadow exhibits very little of the desired vegetative component, with less than 3 hardwood species present.

Spring area BR-17 - Unsatisfactory/Functioning at Risk – This spring area is in Homestead Meadow. This spring exhibits very little of the desired vegetative component.

Spring area BR-18 - Unsatisfactory/Functioning at Risk – This spring area is in Corporation Meadow. This spring exhibits very little of the desired vegetative component, with less than 3 hardwood species present.

Spring area BR-19 - Unsatisfactory/Functioning at Risk – This spring area is on lower East Creek. This spring exhibits hummocking and streambank alteration greater than 20%.

Spring area BR-20 - Unsatisfactory/Functioning at Risk – This spring area in Skunk Cabbage Meadow exhibits very little of the desired vegetative component, and hummocking is present.

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Aspen:

Aspen BR-9/Bear Camp – Satisfactory/Not at Desired Condition - These aspen stands, located adjacent to the South Warner Road, exhibit poor regeneration and are being dominated by conifers.

Economics:

Unsatisfactory permittee costs to achieve effective livestock distribution and maintain positive control within the allotment.

ADDITIONAL INFORMATION

Rangeland Vegetation Restoration

Under the **Stewardship** and **No Grazing Alternatives,** the conifers invading Aspen area BR-9/Bear Camp, which are less than 22 inches in diameter, will be removed, followed by management ignited prescribed fire. All applicable Best Management Practices will be followed during treatment.

Wilderness

A small portion of the Bear Camp Allotment lies within the South Warner Wilderness. Under all WMRP Alternatives, the ***South Warner Wilderness Fire Management Plan*** *(1997),* would apply to the Wilderness portion of the Bear Camp Allotment. Under the ***South Warner Wilderness Fire Management Plan***, naturally ignited fires (i.e. lightning strikes), may be allowed to burn within a specified prescription in order to allow this natural process to return to the South Warner Wilderness. When a lightning strike occurs, the District Ranger, Wilderness Manager and Fire Management personnel, will determine whether pre-determined prescription criteria can be met to allow the fire to follow its natural course within the Wilderness. The permittees on the Bear Camp Allotment will rest the burned area from livestock grazing for 1-3 years, based upon vegetation monitoring data, to allow the natural re-establishment of post-burn vegetation.

Grazing Systems

Permittees on this allotment currently employ a full-time range rider who makes use of a range rider cabin owned by the Forest Service, and permitted as a range management facility.

Herding

There is an area of about 188 acres just south of Corporation Meadow, where a heavy concentration of logging slash from past commercial timber sales makes herding of livestock very difficult. Cattle get into this area and it is very difficult to herd them out. Under the **Stewardship Alternative** this logging slash will be broadcast burned. All applicable Best Management Practices will be followed during this burning treatment. This action is identified as BR-12 in **TABLE 3-2** and on the **Bear Camp Management Practices Map**.

TABLE 3-2
Bear Camp Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*Bear Camp and Selic Allotment Management Plans-Environmental Assessment, April 1995, Decision Notice, 4/18/95*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See Bear Camp Map*	*See Bear Camp Map*	
Grazing System	*5 pasture Deferred*	*5 pasture Deferred*	
Numbers & Season	*1,005 cow/calf pairs from 7/16 to 9/30*	*1,005 cow/calf pairs from 7/16 to 9/30*	
Total Head Months	*2,580 HM*	*2,580 HM*	
Utilization Standards			*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian		***Streamreaches 271, 272, 273, 281 & 291*** *Herbaceous – 35%* *Browse - 20%* *Streambank - 20%* *Stubble-height-5"* ***Spring areas (BR-16, BR-17, BR- 18, BR-19 & BR-20)*** *Herbaceous – 35%* *Browse - 20%* *Stubble-height-4"*	
	All other riparian *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***All other riparian*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*	
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration *Aspen*	*NONE*	*200 acres (BR-9) remove conifers, burn*	*200 acres (BR-9) remove conifers, burn*
Stream Restoration	*NONE*	*NONE*	*NONE*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Range Improvements			
Fence Reconstruction	*NONE*	*1.75 miles (BR-13)* *2.9 miles (BLC-14)*	*NONE*
Herding Facilitation	*NONE*	*188 ac burn logging slash (BR-12)* *1.50 miles fenced holding field (BR-14)*	*NONE*
Permittee Actions			
Fence Maintenance	*13.8 miles*	*15.3 miles*	*13.8 miles*
Water Source Maintenance	*10*	*10*	*10*
Extra Herding	*Full-time Range Rider*	*Full-time Range Rider*	*NONE*
Monitoring:			
Annual (implementation);	*High Priority, key areas on this allotment will be monitored using full measurement or ocular estimates*	*A minimum number of key areas will be monitored by full measurement.*	*NONE*
Long-term (effectiveness)	*3 benchmarks identified in this Allotment (Regional Contract)*	*Minimum of 3 benchmarks identified in this Allotment (Regional Contract)*	*3 benchmarks identified in this Allotment (Regional Contract)*

BIDWELL ALLOTMENT

Three Alternatives are described for the Bidwell Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

In 1997, a *Mt. Bidwell and Bidwell Allotment Management Plans Environmental Assessment* was completed and Decision Notice signed. Many of the actions included in the 1997 Decision have already been implemented, and are included as existing improvements on the **Bidwell Management Practices Map.** Some of the actions included in the 1997 Decision have not yet been implemented, and are included as proposed activities for both the **Current Management** and **Stewardship Alternatives** in the **Table of Management Practices by Alternative,** and on the **Management Practices Map.**

Bidwell Allotment contains habitat for the threatened Warner Sucker. During completion of the 1997 Environmental Assessment, formal consultation was completed with the US Fish and Wildlife Service, who concurred on the Biological Opinion. All actions prescribed in that Biological Opinion are included in both the **Current Management** and **Stewardship Alternatives**.

FOCUS AREAS

Riparian (Streams and Springs):

Stream reach 32 - Unsatisfactory/Properly Functioning - This is a portion of Twelvemile Creek, which is habitat for the Warner sucker and the Warner Valley redband trout. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present.

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Economics:

Unsatisfactory permittee costs to achieve effective livestock distribution and maintain positive control within the allotment.

TABLE 3-3
Bidwell Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*Mount Bidwell and Bidwell Allotment Management Plans-Environmental Assessment, May 1997, Decision Notice, 7/30/97*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See Bidwell Map*	*See Bidwell Map*	
Grazing System	*Deferred, mid-season*	*Deferred, mid-season*	
Numbers & Season	*65 cow/calf pairs 7/1-8/30*	*65 cow/calf pairs 7/1-8/30*	
Total Head Months	*133 HM*	*133 HM*	
Utilization Standards			*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian	***All other riparian*** *Herbaceous - 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height - 3-5"*	***Streamreach 32*** *Herbaceous – 35%* *Browse - 20%* *Streambank – 20%* *Stubble-height-5"* ***All other riparian*** *Herbaceous - 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height - 4"*	
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration	*NONE*	*NONE*	*NONE*
Stream Restoration	*NONE*	*NONE*	*NONE*
Range Improvements *Fence Reconstruction*	*1.5 miles (B-2)*	*1.5 miles (B-2)*	*NONE*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Permittee Actions			
Fence Maintenance	*1.5 miles*	*1.5 miles*	*1.5 miles*
Water Source Maintenance	*NONE*	*NONE*	*NONE*
Monitoring: *Annual (implementation)*	*Low Priority, key areas on this allotment will be monitored only after all High priority allotments have been monitored*	*A minimum of one key area will be monitored, more if funding allows. Monitoring may be full measurement or ocular*	*NONE*
Long-term (effectiveness)	*NONE*	*Minimum of 1 benchmark in this Allotment*	*NONE*

BLUE LAKE CATTLE ALLOTMENT

Three Alternatives are described for the Blue Lake Cattle Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

FOCUS AREAS

Riparian (Streams and Springs):

Stream reach 321 - Unsatisfactory/Functioning at Risk – This stream reach is the upper portion of the East Inlet to Blue Lake. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present, and width-to-depth ratios greater than 12. Plugged culverts add sediment to the stream.

Stream reach 322 - Unsatisfactory/Properly Functioning – This stream reach is the lower portion of the East Inlet to Blue Lake. This stream reach exhibits less than the desired vegetative component with less than 3 hardwood species present.

Stream reach 325 - Unsatisfactory/Properly Functioning – This stream reach is Parsnip Creek. This stream reach exhibits less than the desired vegetative component with less than 3 hardwood species present.

Stream reach 341 - Unsatisfactory/Properly Functioning – This stream reach is Parsnip Creek. This stream reach exhibits less than the desired vegetative component with less than 3 hardwood species present and width-to-depth ratios greater than 12.

Spring area BLC-20 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of Harvey Creek. This spring exhibits very little of the desired vegetative component and has recent hummocking.

Spring area BLC-21 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of Parsnip Creek. This spring exhibits very little of the desired vegetative component.

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Aspen:

Aspen BR-9/Blue Lake – Satisfactory/Not at Desired Condition - These aspen stands, located in the Parnip Creek drainage, exhibit poor regeneration and are being dominated by conifers.

Economics:

Unsatisfactory permittee costs to achieve effective livestock distribution and maintain positive control within the allotment.

ADDITIONAL INFORMATION

Rangeland Vegetation Restoration

Under the **Stewardship** and **No Grazing Alternatives,** the conifers invading Aspen area BR-9/Blue Lake, which are less than 22 inches in diameter, will be removed, followed by management ignited prescribed fire. All applicable Best Management Practices will be followed during treatment.

Range Improvements

One pasture of the Blue Lake Cattle Allotment referred to as the Blue Lake Ranch pasture, is an irrigated pasture with two streams running through it. The permittee previously tried the innovative approach of constructing a natural material bridge which the livestock are using to cross over one of the streams rather than wading through the water. Under the **Stewardship Alternative**, the permittee would construct three more of these bridges to improve the distribution of livestock in the pasture, while reducing livestock crossings in the stream. This action is identified as BLC-19 in **TABLE 3-4** and on the **Blue Lake Cattle Management Practices Map**.

The **Stewardship Alternative** includes contruction of fence BLC-17 to prevent unintended livestock use within the Blue Lake Campground. The exact fence location will be delineated on the ground by the Forest Service in cooperation with the livestock permittee. The general vicinity of this fence is indicated on the **Blue Lake Cattle Management Practices Map** by the identifier "BLC-17", and the fence is included in **TABLE 3-4.**

Water development BLC-10, included in the **Stewardship Alternative,** is shown on the **Blue Lake Cattle Management Practices Map,** and included in **TABLE 3-4.** The water development will supply stock water outside of fence BLC-17. The water development will utilize only the overflow on the storage tank for the Blue Lake Campground water system to ensure that the needs of the Campground are met before any water is used for livestock.

TABLE 3-4
Blue Lake Cattle Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See Blue Lake Cattle Map*	*See Blue Lake Cattle Map*	
Grazing System	*5 pasture Deferred. Parsnip Springs pasture is used mid-season.*	*6 pasture Deferred. Parsnip Springs pasture is used as Early-Season With Re-growth, used no later than 8/15.*	
Numbers & Season	*235 cow/calf pairs from 7/1 to 10/10*	*235 cow/calf pairs from 7/1 to 10/10*	
Total Head Months	*799 HM*	*799 HM*	
Utilization Standards			*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian		***Streamreaches 321, 322, 325 & 341*** *Herbaceous – 35%* *Browse - 20%* *Streambank - 20%* *Stubble-height-5"* ***Parsnip Springs pasture (BLC-15)*** *Herbaceous – 45%* *Browse - 20%* *Streambank - 20%* *Stubble-height-4"* ***Spring areas (BLC-20, BLC-21)*** *Herbaceous – 35%* *Browse - 20%* *Stubble-height-5"*	
	All other riparian *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***All other riparian*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*	
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Vegetation Restoration *Aspen*	*NONE*	*190 acres (BR-9) remove conifers, burn*	*190 acres (BR-9) remove conifers, burn*
Stream Restoration	*NONE*	*NONE*	*NONE*
Physical Improvements *Fence Construction*	*NONE*	*4.3 miles (BLC-9, BLC-12, BLC-13 & BLC-17)*	*NONE*
Fence Reconstruction	*NONE*	*3.5 miles (BLC-14)*	*NONE*
Water Developments	*NONE*	*4 (BLC-9, BLC-10, BLC-11, BLC-12),* *1 ditch 1.5 miles per year for 4 years (BLC-18)*	*NONE*
Herding Facilitation	*NONE*	*0.1 miles repair corrals (BLC-16),* *construct 3 livestock bridges (BLC-19)*	*NONE*
Permittee Actions *Fence Maintenance*	*8.75 miles*	*13.05 miles*	*8.75 miles*
Water Source Maintenance	*8*	*12*	*8*
Monitoring: *Annual (implementation):*	*High Priority, key areas on this allotment will be monitored using full measurement or ocular estimates*	*A minimum number of key areas will be monitored by full measurement.*	*NONE*
Long-term (effectiveness)	*NONE*	*Minimum of 1 benchmark in this Allotment*	*NONE*

BLUE LAKE SHEEP ALLOTMENT

Three Alternatives are described for the Blue Lake Sheep Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

FOCUS AREAS

Riparian (Streams and Springs):

Stream reach 321 - Unsatisfactory/Functioning at Risk – This stream reach is the upper portion of the East Inlet to Blue Lake. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present, and width-to-depth ratios greater than 12. Plugged culverts add sediment to the stream.

Stream reach 341 - Unsatisfactory/Properly Functioning – This stream reach is Parsnip Creek. This stream reach exhibits less than the desired vegetative component with less than 3 hardwood species present and width-to-depth ratios greater than 12.

Spring area BLC-21 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of Parsnip Creek. This spring exhibits very little of the desired vegetative component.

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

TABLE 3-5
Blue Lake Sheep Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See Blue Lake Sheep Map*	*See Blue Lake Sheep Map*	
Grazing System	*Deferred, mid-season, move ¼ to ½ mile daily, bedding grounds used once, no bedding in aspen stands*	*Deferred, mid-season, move ¼ to ½ mile daily, bedding grounds used once, no bedding in aspen stands*	
Numbers & Season	*1,000 ewe/lamb pairs from 7/11 to 8/10*	*1,000 ewe/lamb pairs from 7/11 to 8/10*	
Total Head Months	*1,000 HM Sheep*	*1,000 HM Sheep*	
Utilization Standards			*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian		***Streamreaches 321 & 341*** *Herbaceous – 35%* *Browse - 20%* *Streambank - 20%* *Stubble-height-5"* ***Spring area (BLC-21)*** *Herbaceous – 35%* *Browse - 20%* *Stubble-height-5"*	
	All other riparian *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***All other riparian*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*	
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration	*NONE*	*NONE*	*NONE*
Stream Restoration	*NONE*	*NONE*	*NONE*
Range Improvements	*NONE*	*NONE*	*NONE*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Permittee Actions *Extra Herding*	*Full-time Sheep Herder*	*Full-time Sheep Herder*	*NONE*
Monitoring: *Annual (implementation);*	*Low Priority, key areas on this allotment will be monitored only after all High priority allotments have been monitored*	*A minimum of one key area will be monitored, more if funding allows. Monitoring may be full measurement or ocular*	*NONE*
Long-term (effectiveness)	*NONE*	*Minimum of 1 benchmark in this Allotment*	*NONE*

BUCK CREEK ALLOTMENT

Three Alternatives are described for the Buck Creek Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

FOCUS AREAS

Riparian (Streams and Springs):

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Economics:

Unsatisfactory permittee costs to achieve effective livestock distribution and maintain positive control within the allotment.

ADDITIONAL INFORMATION

Grazing Systems

Under the **Stewardship Alternative,** allotment boundary adjustments facilitate an innovative new deferred grazing system for Buck Creek Allotment, including pasture on the permittee's private land.

Allotment Boundary Adjustments

There are currently two permittees on the Buck Creek Allotment. Under current management one permittee primarily grazes northwest of Buck Creek (53 head Months), while the second permittee primarily grazes southeast of Buck Creek (160 Head Months). The Buck Creek permittee who grazes the southeast portion is also the sole permittee on the Fandango Allotment, which adjoins the Buck Creek Allotment to the south and east. To facilitate cost-effective livestock and rangeland resource management, under the **Stewardship Alternative** the boundary between Buck Creek and Fandango Allotments would be shifted, along with the corresponding 160 Head Months, as displayed in **TABLE 3-6** and on the **Buck Creek Management Practices Map**.

There are also currently two permittees on the Myrtle Creek Allotment, which is located immediately north of the Buck Creek Allotment. On Myrtle Creek Allotment, generally one permittee grazes north of Cottonwood Creek (146 Head Months), while the second permittee grazes south of Cottonwood Creek (50 Head Months). The Myrtle Creek permittee who grazes south of Cottonwood Creek is also the permittee on Buck Creek Allotment who currently grazes northwest of Buck Creek. To facilitate cost-effective livestock and rangeland resource management, under the **Stewardship Alternative** the boundary between Buck Creek and Myrtle Creek Allotments would be shifted, along with the corresponding 50 Head Months, see **TABLE 3-6** and **MAP**. Taken together, under the **Stewardship Alternative** the two boundary adjustments and corresponding Head Month adjustments would result in no net change from Head Months permitted under the **Current Management Alternative**. Myrtle Creek Allotment would be reduced from 196 Head Months to

146 Head Months. Buck Creek Allotment would be reduced from 213 Head Months to 103 Head Months. Fandango Allotment would increase from 934 Head Months to 1,094 Head Months.

TABLE 3-6
Buck Creek Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See Buck Creek Map*	*See Buck Creek Map - move north boundary (MC/BC-1) to Cottonwood Cr., and corresponding 50 HM reassigned to Buck Cr. Allotment from Myrtle Cr. Allotment; move southeast boundary (BC/F-1) to Buck Cr., with corresponding 160 HM reassigned from Buck Cr. Allotment to Fandango Allotment*	*See Buck Creek Map - move north boundary (MC/BC-1) to Cottonwood Cr., and corresponding 50 HM reassigned to Buck Cr. Allotment from Myrtle Cr. Allotment; move southeast boundary (BC/F-1) to Buck Cr., with corresponding 160 HM reassigned from Buck Cr. Allotment to Fandango Allotment (All HM in Non-Use for Resource Protection)*
Grazing System	*Season-long*	*Deferred, partial season*	
Numbers & Season	*60 cow/calf pairs from 6/16 to 9/30*	*58 cow/calf pairs for 54 days, For three years, from 6/16 to 8/8, on the 4th year, turn-out at the north end of the Allotment on 8/7 through 9/30. Repeat this 4 year cycle.*	
Total Head Months	*213 HM*	*103 HM*	
Utilization Standards			*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian	***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***All Other Riparian*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*	
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration	*NONE*	*NONE*	*NONE*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Stream Restoration	*NONE*	*NONE*	*NONE*
Range Improvements *Fence Construction*	*NONE*	*0.75 miles (BC-1)*	*NONE*
Permittee Actions *Fence Maintenance* *Water Source Maintenance*	*0.1 miles* *NONE*	*0.85 miles* *NONE*	*0.1 miles* *NONE*
Monitoring: *Annual (implementation)* *Long-term (effectiveness)*	*Low Priority, key areas on this allotment will be monitored only after all High priority allotments have been monitored* *1 benchmark identified in this Allotment (Regional Contract)*	*A minimum of one key area will be monitored, more if funding allows. Monitoring may be full measurement or ocular* *Minimum of 1 benchmark in this Allotment (Regional Contract)*	*NONE* *1 benchmark identified in this Allotment (Regional Contract)*

CEDAR CANYON ALLOTMENT

Three Alternatives are described for the Cedar Canyon Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

FOCUS AREAS

Riparian (Streams and Springs):

Stream reach 151 - Unsatisfactory/Functioning at Risk – This is Cedar Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present.

Stream reach 152 - Unsatisfactory/Non-Functioning – This is Cedar Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present. This reach has headcuts and downcutting, which is dewatering the meadow.

Stream reach 161 - Unsatisfactory/Functioning at Risk – This is North Deep Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present. This reach has stream downcutting.

Spring area CC-12 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of Cedar Creek. This spring exhibits very little of the desired vegetative component and recent hummocking is present.

Spring area CC-13 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of North Deep Creek. This spring exhibits very little of the desired vegetative component.

Spring area CC-14 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of South Deep Creek. This spring exhibits very little of the desired vegetative component.

Spring area CC-15 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of South Deep Creek. This spring exhibits very little of the desired vegetative component

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Aspen:

Aspen CC-7 – Unsatisfactory/Non-Functioning – This is an aspen stand along Cedar Creek. Stand exhibits very little regeneration and is being dominated by conifers.

Aspen CC-8 – Unsatisfactory/Non-Functioning – These are aspen stands in both North and South Deep Creek. Stands exhibit very little regeneration and is being dominated by conifers.

Aspen CC-9 – Unsatisfactory/Non-Functioning – This is an aspen stand in the South Fork of Deep Creek. Stand exhibits very little regeneration and is being dominated by conifers.

Upland:

Juniper CC-10 - Satisfactory/Not at Desired Condition due to the predominance of juniper trees on the site, which are suppressing the expression of other desired vegetation and increasing wildfire severity potential. Lack of fire is the primary cause of the current condition.

Economics:

Unsatisfactory permittee costs to achieve effective livestock distribution and maintain positive control within the allotment.

ADDITIONAL INFORMATION

Rangeland Vegetation Restoration

Under the **Stewardship** and **No Grazing Alternatives,** the conifers invading Aspen areas CC-7 and CC-9, which are less than 22 inches in diameter, will be removed, followed by management ignited prescribed fire. After the fire, the areas will be fenced until young aspen are established. All applicable Best Management Practices will be followed during treatment.

Under the **Stewardship** and **No Grazing Alternatives,** Aspen area CC-8, which has already had the conifers removed, will be fenced until young aspen are established.

Under the **Stewardship** and **No Grazing Alternatives,** in Juniper area CC-10, all junipers over 1" in diameter at the base, will be cut down, and the limbs and tops cut off and scattered. The juniper cutting will be followed by prescribed management ignited fire. All applicable Best Management Practices will be followed during treatment. Within CC-10, juniper leave areas approximately ¼ to ½ acre in size will not be treated to create wildlife habitat diversity. These leave areas will cover an estimated 2% of the CC-10 area. In addition to rangeland restoration, another purpose of the project is to reduce wildfire severity potential.

Steam Restoration

Currently, stream restoration projects have been approved for stream reaches 151 and 152 under a separate NEPA analysis and Decision. This restoration is funded in Fiscal Year 2000 and is expected to be completed before issuance of the WMRP Decision. The restoration work will result in additional short-term ecological disturbance to these stream reaches. Any consideration of use as described below in **Grazing Systems,** will consider the ecological condition existing after the completion of the stream restoration projects.

Grazing Systems

Under current management there are two Units recognized on Cedar Canyon Allotment in two different geographical sections of the Allotment, referred to as the Cedar Creek and Deep Creek Units. The Units have had separate grazing systems. The Cedar Creek Unit is currently not under permit and is not being grazed. Under the **Stewardship Alternative,** rather than remaining under separate grazing systems, the Cedar Creek Unit will be considered for incorporation into a two pasture rest-rotation grazing system with the Deep Creek Unit.

TABLE 3-7
Cedar Canyon Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See Cedar Canyon Map*	*See Cedar Canyon Map*	
Grazing System	***Cedar Creek Unit*** *Not currently under Permit. Previous Grazing Strategy: Deferred, short-season and 1 fenced pasture*	***Cedar Creek Unit*** *To be considered for combining with the Deep Creek Unit under a two-pasture Rest-Rotation system*	
Numbers & Season	*67 cow/calf pairs from 6/1 to 8/31*		
Unit Head Months	*231 HM*		
Grazing System	***Deep Creek Unit*** *Season-long*	***Deep Creek Unit*** *Season-long*	
Numbers & Season	*80 cow/calf pairs from 6/1 to 9/20*	*80 cow/calf pairs from 6/1 to 9/20*	
Unit Head Months	*299 HM*	*299 HM*	
Total Head Months	*530 HM*	*530 HM*	
Utilization Standards			*NONE*
Uplands	***Both Units*** *Herbaceous – 50%* *Browse - 20%*	***Both Units*** *Herbaceous – 50%* *Browse - 20%*	
Riparian	***Cedar Creek Unit***	***Cedar Creek Unit*** *(Rest-Rotation)* ***Streamreach 151*** *Herbaceous – 35%* *Browse - 20%* *Streambank – 20%* *Stubble-height-5"* ***Streamreach 152-fenced pasture*** *Herbaceous – 25%* *Browse - 20%* *Streambank – 20%* *Stubble-height-6"*	

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Utilization Standards *Riparian cont.*		***Streamreach 152-outside pasture*** *Herbaceous – 25%* *Browse - 20%* *Streambank – 20%* *Stubble-height-6"* ***Spring area (CC-12)*** *Herbaceous – 35%* *Browse - 20%* *Stubble-height-5"*	
	All other riparian *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*	
	Deep Creek Unit	***Deep Creek Unit*** *Season-long (Rest-Rotation)* ***Streamreach 161*** *Herbaceous – 35% (35%)* *Browse - 20% (20%)* *Streambank – 20% (20%)* *Stubble-height-6" (6")* ***Spring areas (CC-13, 14 & 15)*** *Herbaceous – 35% (35%)* *Browse - 20% (20%)* *Stubble-height-6" (6")*	
	All other riparian *Herbaceous – 40%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*	***All other riparian*** *Herbaceous – 40% (50%)* *Browse - 20% (20%)* *Streambank – 20% (20%)* *Stubble-height-4" (3")*	
Aspen	***Both Units*** *Included in Uplands*	***Both Units*** *Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration *Aspen*	*NONE*	***Cedar Creek Unit*** *90 acres (CC-7, CC-9)* *Remove conifers, burn, and fence*	***Cedar Creek Unit*** *90 acres (CC-7, CC-9)* *Remove conifers, burn, and fence*
	NONE	***Deep Creek Unit*** *100 acres (CC-8) fence*	***Deep Creek Unit*** *100 acres (CC-8) fence*
Juniper		***Cedar Creek Unit*** *100 acres (CC-10) remove juniper, burn*	***Cedar Creek Unit*** *100 acres (CC-10) remove juniper, burn*
Stream Improvement	*NONE*	*NONE*	*NONE*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Range Improvements *Fence Construction*	***Cedar Creek Unit*** *NONE* ***Deep Creek Unit*** *NONE*	***Cedar Creek Unit*** *2.0 miles (CC-5)* ***Deep Creek Unit*** *0.5 miles (CC-8)*	*NONE* *NONE*
Fence Reconstruction	***Cedar Creek Unit*** *NONE*	***Cedar Creek Unit*** *0.1 miles (CC-11)* *2 .0 miles (CC-3)*	*NONE*
Permittee Actions *Fence Maintenance*	***Cedar Creek Unit*** *2.0 miles* ***Deep Creek Unit*** *0.25 miles*	***Cedar Creek Unit*** *4.1 miles* ***Deep Creek Unit*** *0.75 miles*	***Cedar Creek Unit*** *2.0 miles* ***Deep Creek Unit*** *0.25 miles*
Monitoring: *Annual (implementation);*	*High Priority, key areas on this allotment will be monitored using full measurement or ocular estimates*	*A minimum number of key areas will be monitored by full measurement.*	*NONE*
Long-term (effectiveness)	*1 benchmark identified in this Allotment (**Deep Creek Unit**) (Regional Contract).*	*Minimum of 1 benchmark in this Allotment*	*1 benchmark identified in this Allotment (**Deep Creek Unit**) (Regional Contract)*

COYOTE ALLOTMENT

Three Alternatives are described for the Coyote Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

FOCUS AREAS

Riparian (Streams and Springs):

Spring area BLC-20 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of Harvey Creek. This spring exhibits very little of the desired vegetative component and has recent hummocking.

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Economics:

Unsatisfactory permittee costs to achieve effective livestock distribution and maintain positive control within the allotment.

ADDITIONAL INFORMATION

Wilderness

A portion of the Coyote Allotment lies within the South Warner Wilderness. Under all WMRP Alternatives, the ***South Warner Wilderness Fire Management Plan*** *(1997),* would apply to the Wilderness portion of the Coyote Allotment. Under the ***South Warner Wilderness Fire Management Plan***, naturally ignited fires (i.e. lightning strikes), may be allowed to burn within a specified prescription in order to allow this natural process to return to the South Warner Wilderness. When a lightning strike occurs, the District Ranger, Wilderness Manager and Fire Management personnel, will determine whether pre-determined prescription criteria can be met to allow the fire to follow its natural course within the Wilderness. The permittee on the Coyote Allotment will rest the burned area from livestock grazing for 1-3 years, based upon vegetation monitoring data, to allow the natural re-establishment of post-burn vegetation.

TABLE 3-8
Coyote Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See Coyote Map*	*See Coyote Map*	
Grazing System	*3 pasture Deferred*	*3 pasture Deferred*	
Numbers & Season	*100 cow/calf pairs from 5/16 to 9/30*	*100 cow/calf pairs from 5/16 to 9/30*	
Total Head Months	*460 HM*	*460 HM*	
Utilization Standards			*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian	***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***Spring area (BLC-20)*** *Herbaceous – 35%* *Browse - 20%* *Stubble-height-5"* ***All other riparian*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*	
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration	*NONE*	*NONE*	*NONE*
Stream Restoration	*NONE*	*NONE*	*NONE*
Range Improvements *Fence Reconstruction*	*NONE*	*0.6 miles (BLC-14)*	
Permittee Actions *Fence Maintenance*	*6.5 miles*	*6.5 miles*	*6.5 miles*
Water Source Maintenance	*14*	*14*	*14*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Monitoring: *Annual (implementation);*	*Low Priority, key areas on this allotment will be monitored only after all High priority allotments have been monitored*	*A minimum of one key area will be monitored, more if funding allows. Monitoring may be full measurement or ocular*	*NONE*
Long-term (effectiveness)	*NONE*	*Minimum of 1 benchmark in this Allotment*	*NONE*

DAVIS CREEK ALLOTMENT

Three Alternatives are described for the Davis Creek Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

In 1994, an *Environmental Assessment of the Proposed Management Davis Creek C&H Allotment* was completed and Decision Notice signed. Many of the actions included in the 1994 Decision have already been implemented, and are included as existing improvements on the **Davis Creek Management Practices Map.** Some of the actions included in the 1994 Decision have not yet been implemented, and are included as proposed activities for both the **Current Management** and **Stewardship Alternatives** in the **Table of Management Practices by Alternative,** and the **Management Practices Map.**

FOCUS AREAS

Riparian (Streams and Springs):

Stream reach 123 - Unsatisfactory/Properly Functioning – This is the Middle Fork of Davis Creek and the lower portion of the South Fork of Davis Creek. These stream reaches exhibit less than the desired vegetative component with less than 3 hardwood species present, and has a high sensitivity to disturbance.

Stream reach 124 & 125 - Unsatisfactory/Functioning at Risk – This is the upper portion of the South Fork of Davis Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present. These reaches have high sensitivity to disturbance and high sedimentation from old logging road crossings.

Stream reach 126 - Unsatisfactory/Non-Functioning – This is the headwaters of the South Fork of Davis Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present. This stream reach has width-to-depth ratios greater than 12, and water temperatures in excess of 70 degrees Fahrenheit, with active headcuts.

Stream reach 127 - Unsatisfactory/Functioning at Risk – This is the upper portion of the South Fork of Davis Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present. This reach has high sensitivity to disturbance.

Spring area DC-16 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of Ross Creek. This spring exhibits very little of the desired vegetative component and recent hummocking is present.

Spring area DC-17 - Unsatisfactory/Non-Functioning – This spring area is the headwaters of the south Fork of Davis Creek. This spring exhibits very little of the desired vegetative component, bare ground and recent hummocking is present.

Spring area DC-18 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of the south Fork of Davis Creek. This spring exhibits very little of the desired vegetative component.

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Aspen:

Aspen DC-10 – Satisfactory/Not at Desired Condition - These aspen stands exhibit poor regeneration and are being dominated by conifers.

Upland:

Bitterbrush DC-12 - Satisfactory/Not at Desired Condition due to the predominance of juniper trees on the site, which are suppressing the health and vigor of bitterbrush and increasing wildfire severity potential. Lack of fire is the primary cause of the current condition.

Sagebrush DC-11 - Satisfactory/Not at Desired Condition due to the decadent condition of the sagebrush, which is suppressing the expression of other desired vegetation and increasing wildfire severity potential. Lack of fire is the primary cause of the sagebrush condition.

Economics:

Unsatisfactory permittee costs to achieve effective livestock distribution and maintain positive control within the allotment.

ADDITIONAL INFORMATION

Rangeland Vegetation Restoration

Under the **Stewardship** and **No Grazing Alternatives,** the conifers invading Aspen area DC-10 which are less than 22 inches in diameter, will be removed, followed by management ignited prescribed fire. All applicable Best Management Practices will be followed during treatment.

Under the **Stewardship** and **No Grazing Alternatives,** in Bitterbrush area DC-12, all junipers over 1" in diameter at the base, will be cut down, and the limbs and tops cut off and scattered. The juniper cutting will be followed by prescribed management ignited fire. Bitterbrush is susceptible to high intensity fire. The juniper cutting, following by prescribed management ignited fire, will facilitate the maintenance of fuel conditions that would result in low to moderate intensity fire, should wildfire occur after treatment. All applicable Best Management Practices will be followed during treatment. In addition to rangeland restoration, another purpose of the project is to reduce wildfire severity potential.

Under the **Stewardship** and **No Grazing Alternatives,** the decadent sagebrush in Upland area DC-11 will be treated with prescribed management ignited fire, followed by two growing seasons of rest from livestock grazing to allow re-establishment of the desired forbs and grass vegetation. All applicable Best Management Practices will be followed during treatment.

Steam Restoration

Under the **Stewardship** and **No Grazing Alternatives**, two stream crossings on abandoned roads on the South Fork of Davis Creek will be restored, utilizing mechanized equipment. Culverts were

removed from these two crossings approximately 15 years ago, however, the streambanks were not recontoured, and the remaining road fill is sloughing, causing siltation of the stream. These two sites together are displayed as DC-4 in **TABLE 3-9** and on the **Management Practices Map**. All applicable Best Management Practices will be followed during treatment.

Under the 1994 Davis Creek Allotment Decision, culvert removal and streambank recontouring were approved for a third stream crossing on an abandoned road on the South Fork of Davis Creek. However, this activity has not been accomplished and is identified again under the **Stewardship Alternative**. This site is identified as DC-7 in **TABLE 3-9** and on the **Management Practices Map**. This project would also be accomplished with mechanized equipment. All applicable Best Management Practices will be followed during treatment.

Grazing Systems

Under current management there are two permittees on Davis Creek Allotment, who graze their livestock on two different geographical sections of the Allotment, referred to as the North and South Units. The Units have separate grazing systems. Under the **Stewardship Alternative,** the permittees would continue to operate on the two separate Units, with separate grazing systems.

Allotment Boundary Adjustments

The **Stewardship Alternative** includes two allotment boundary adjustments for Davis Creek Allotment, as displayed in **TABLE 3-9** and on the **Management Practices Map**. Both of these adjustments affect the boundary between Davis Creek and Bald Mountain Allotments. These adjustments facilitate cost-effective positive control of livestock.

TABLE 3-9
Davis Creek Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*Proposed Management of the Davis Creek C&H Allotment-Environmental Assessment, October 1994, Decision Notice, 11/20/95*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See Davis Creek Map*	*See Davis Creek Map – move southwestern boundary with Bald Mountain Allotment north, to facilitate fence construction (DC-15/BM14). Move southeastern boundary with Bald Mountain to old fence line (DC-14/ BM-13)*	
Grazing System	***North Unit*** *7 Deferred pastures*	***North Unit*** *7 Deferred pastures*	
Numbers & Season	*186 cow/calf pairs from 5/16 to 9/30*	*229 cow/calf pairs from 5/16 to 9/30*	
Unit Head Months	*856 HM*	*1,054 HM*	
Grazing System	***South Unit*** *Season-long*	***South Unit*** *Season-long*	
Numbers & Season	*23 cow/calf pairs from 5/16 to 8/30, 65 pair 5/16 to 9/30 and 3 pair 6/16 to 9/15*	*42 cow/calf pairs from 5/16 to 9/30*	
Unit Head Months	*389 HM*	*191 HM*	
Total Head Months	*1,245 HM*	*1,245 HM*	
Utilization Standards			*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian	***North Unit***	***North Unit*** ***Streamreach 123*** *Herbaceous – 35%* *Browse - 20%* *Streambank – 20%* *Stubble-height-5"* ***Spring area (DC-16)*** *Herbaceous – 35%* *Browse - 20%* *Stubble-height-5"*	

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Utilization Standards *Riparian cont.*	***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"* ***South Unit*** ***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***All other riparian*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"* ***South Unit*** ***Streamreaches 124, 125, 127*** *Herbaceous – 35%* *Browse - 20%* *Streambank – 20%* *Stubble-height-6"* ***Streamreach 126*** *Herbaceous – 0%* *Browse - 0%* *Streambank – 0%* *Stubble-height-NA* ***Spring area (DC-17)*** *Herbaceous – 0%* *Browse - 0%* *Stubble-height-NA* ***Spring area (DC-18)*** *Herbaceous – 35%* *Browse - 20%* *Stubble-height-5"* ***All other riparian*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*	
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration			
Aspen	***South Unit*** *NONE*	***South Unit*** *250 acres (DC-10) remove conifers, burn*	***South Unit*** *250 acres (DC-10) remove conifers, burn*
Bitterbrush	*NONE*	219 acres (DC-12) remove juniper, burn	219 acres (DC-12) remove juniper, burn
Sagebrush	310 acres (DC-11) burn	310 acres (DC-11) burn	310 acres (DC-11) burn
Stream Restoration	***South Unit*** *1 (DC-7)*	***South Unit*** *2 (DC-4, DC-7)*	***South Unit*** *2 (DC-4, DC-7)*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Range Improvements	***North Unit***	***North Unit***	***North Unit***
Fence Construction	*NONE*	*0.25 miles (LC-8b)*	*NONE*
Fence Reconstruction	*NONE*	*0.25 miles (LC-8a)*	*NONE*
	South Unit	***South Unit***	***South Unit***
Fence Construction	*NONE*	*2.0 miles (DC-1, DC14/BM-13 & DC-15/BM-14)*	*NONE*
Water Developments	*NONE*	*1 (DC-1)*	*NONE*
Permittee Actions			
Fence Maintenance	*15.25 miles*	*17.50 miles*	*15.25 miles*
Water Source Maintenance	*4*	*5*	*4*
Monitoring:			
Annual (implementation):	*High Priority, key areas on this allotment will be monitored using full measurement or ocular estimates*	*A minimum number of key areas will be monitored by full measurement.*	*NONE*
Long-term (effectiveness)	*1 benchmark identified in this Allotment (Regional Contract)*	*Minimum of 1 benchmark in this Allotment (Regional Contract)*	*1 benchmark identified in this Allotment (Regional Contract)*

EMERSON-COTTONWOOD ALLOTMENT

Three Alternatives are described for the Emerson-Cottonwood Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

FOCUS AREAS

Riparian (Streams and Springs):

Spring area WS-8 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of the Cottonwood Creek, near Patterson Lake. This spring exhibits very little of the desired vegetative component and has recent hummocking.

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

ADDITIONAL INFORMATION

Wilderness

The Emerson-Cottonwood Allotment lies entirely within the South Warner Wilderness. Under all WMRP Alternatives, the ***South Warner Wilderness Fire Management Plan*** *(1997),* would apply to the Emerson-Cottonwood Allotment. Under the ***South Warner Wilderness Fire Management Plan***, naturally ignited fires (i.e. lightning strikes), may be allowed to burn within a specified prescription in order to allow this natural process to return to the South Warner Wilderness. When a lightning strike occurs, the District Ranger, Wilderness Manager and Fire Management personnel, will determine whether pre-determined prescription criteria can be met to allow the fire to follow its natural course within the Wilderness. The permittee on the Emerson-Cottonwood Allotment will rest the burned area from livestock grazing for 1-3 years, based upon vegetation monitoring data, to allow the natural re-establishment of post-burn vegetation.

TABLE 3-10
Emerson-Cottonwood Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See Emerson-Cottonwood Map*	*See Emerson-Cottonwood Map*	
Grazing System	*3 pasture Rest-Rotation, each pasture rested 1 year out of 3*	*3 pasture Rest-Rotation, each pasture rested 1 year out of 3*	
Numbers & Season	*120 cow/calf pairs from 7/1 to 9/15, 3 pair from 5/1 to 6/30*	*120 cow/calf pairs from 7/1 to 9/15, 3 pair from 5/1 to 6/30*	
Total Head Months	*316 HM*	*316 HM*	
Utilization Standards			*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian	***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3"*	
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration	*NONE*	*NONE*	*NONE*
Stream Restoration	*NONE*	*NONE*	*NONE*
Range Improvements	*NONE*	*NONE*	*NONE*
Permittee Actions *Fence Maintenance*	*3.25 miles*	*3.25 miles*	*3.25 miles*
Monitoring: *Annual (implementation);*	*Low Priority, key areas on this allotment will be monitored only after all High priority allotments have been monitored*	*A minimum of one key area will be monitored, more if funding allows. Monitoring may be full measurement or ocular*	*NONE*
Long-term (effectiveness)	*NONE*	*Minimum of 1 benchmark in this Allotment*	*NONE*

FANDANGO ALLOTMENT

Three Alternatives are described for the Fandango Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

FOCUS AREAS

Riparian (Streams and Springs):

Spring area F-7 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of Venning Creek. This spring exhibits very little of the desired vegetative component.

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Aspen:

Aspen F-1a – Satisfactory/Not at Desired Condition - These aspen stands exhibit poor regeneration and are being dominated by conifers.

Upland:

Sagebrush F-1b & F-6 - Satisfactory/Not at Desired Condition due to the decadent condition of the sagebrush, which is suppressing the expression of other desired vegetation and increasing wildfire severity potential. Lack of fire is the primary cause of the sagebrush condition.

Economics:

Unsatisfactory permittee costs to achieve effective livestock distribution and maintain positive control within the allotment.

ADDITIONAL INFORMATION

Rangeland Vegetation Restoration

Under the **Stewardship** and **No Grazing Alternatives,** the conifers invading Aspen area F-1a which are less than 22 inches in diameter, will be removed, followed by management ignited prescribed fire. All applicable Best Management Practices will be followed during treatment.

Under the **Stewardship** and **No Grazing Alternatives,** the decadent sagebrush in Upland areas F-1b and F-6, will be treated with prescribed management ignited fire, followed by two growing seasons of rest from livestock grazing to allow re-establishment of the desired forbs and grass vegetation. All applicable Best Management Practices will be followed during treatment.

Range Improvements

Under the **Stewardship Alternative**, for water development project F-2, all juniper trees within a distance of approximately 200 feet of the spring will be cut down, and the existing springbox and trough will be repaired. All applicable Best Management Practices will be followed during treatment.

Allotment Boundary Adjustments

The Fandango Allotment permittee also one of the two permittees on the adjacent Buck Creek Allotment, located to the north and west of the Fandango Allotment. is the Buck Creek Allotment. There are currently two permittees on the Buck Creek Allotment. Under current management on the Buck Creek Allotment, one permittee primarily grazes northwest of Buck Creek (53 head Months), while the second permittee, who is also the Fandango Allotment permittee, primarily grazes southeast of Buck Creek (160 Head Months). To facilitate cost-effective livestock and rangeland resource management, under the **Stewardship Alternative** the boundary between Buck Creek and Fandango Allotments would be shifted, along with the corresponding 160 Head Months, as displayed in **TABLE 3-11** and on the **Management Practices MAP**. This boundary adjustment and corresponding Head Month adjustment would result in no net change from Head Months permitted under the **Current Management Alternative**.

TABLE 3-11
Fandango Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See Fandango Map*	*See Fandango Map - move northeast boundary (BC/F-1) to Buck Cr., and corresponding 160 HM reassigned to Fandango Allotment from Buck Cr. Allotment*	*See Fandango Map - move northeast boundary (BC/F-1) to Buck Cr., and corresponding 160 HM reassigned to Fandango Allotment from Buck Cr. Allotment (All HM in Non-Use for Resource Protection)*
Grazing System	*Season-long*	*Season -long*	
Numbers & Season	*203 cow/calf pairs from 5/16 to 9/30*	*203 cow/calf pairs, from 5/16 to 9/30, and 45 cow/calf pairs from 6/16 to 9/30*	
Total Head Months	*934 HM*	*1,094 HM*	
Utilization Standards			*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian		***Spring area (F-7)*** *Herbaceous – 35%* *Browse - 20%* *Streambank – 20%* *Stubble-height-6"*	
	All other riparian *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***All other riparian*** *Herbaceous – 40%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*	
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration *Aspen*	*NONE*	*80 acres (F-1a) remove Conifers, burn*	*80 acres (F-1a) remove conifers, burn*
Sagebrush	*NONE*	*4,096 acres (F-1b, F-6) burn*	*4,096 acres (F-1b, F-6) burn*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Stream Restoration	*NONE*	*NONE*	*NONE*
Range Improvements			
Fence Construction	*NONE*	*0.75 miles (BC-1)*	*NONE*
Fence Reconstruction	*NONE*	*0.50 miles(F/LC-1)*	*NONE*
Water Developments	*NONE*	*5 (F-1, F-2, F-3, F-4 & F-5)*	*NONE*
Herding Facilitation	*NONE*	*Brush stock trail, 1.0 miles (F-2a)*	*NONE*
Permittee Actions			
Fence Maintenance	*2.5 miles*	*3.25 miles*	*2.5 miles*
Water Source Maintenance	*1*	*6*	*1*
Monitoring:			
Annual (implementation):	*Low Priority, key areas on this allotment will be monitored only after all High priority allotments have been monitored*	*A minimum of one key area will be monitored, more if funding allows. Monitoring may be full measurement or ocular*	*NONE*
Long-term (effectiveness)	*NONE*	*Minimum of 1 benchmark in this Allotment*	*NONE*

GRANGER ALLOTMENT

Three Alternatives are described for the Granger Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

FOCUS AREAS

Riparian (Streams and Springs):

Stream reach 171 - Unsatisfactory/Functioning at Risk – This stream reach is Parker Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present. This stream reach has water temperatures in excess of 70 degrees Fahrenheit. Additional temperature studies are being conducted. If they indicate water temperature is less than 70 degrees Farenheit, then Ecological Condition will be changed to Unsatisfactory/Properly Functioning.

Stream reach 173 - Unsatisfactory/Functioning at Risk – This stream reach is Parker Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present. This stream reach has water temperatures in excess of 70 degrees Fahrenheit and width-to-depth ratios in excess of 12.

Spring area GC-9 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of North Parker Creek. This spring exhibits very little of the desired vegetative component.

Spring area GC-10 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of MilkCreek. This spring exhibits very little of the desired vegetative component.

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Aspen:

Aspen GC-5 – Satisfactory/Not at Desired Condition - These aspen stands, located in the Parnip Creek drainage, exhibit poor regeneration and are being dominated by conifers.

Aspen GC-6 – Unsatisfactory/Non-Functioning – This aspen stand, located in the headwaters of the North Fork of Parker Creek, exhibits very little regeneration and is being dominated by conifers.

Economics:

Unsatisfactory permittee costs to achieve effective livestock distribution and maintain positive control within the allotment.

ADDITIONAL INFORMATION

Rangeland Vegetation Restoration

Under the **Stewardship** and **No Grazing Alternatives,** the conifers invading Aspen areas GC-5 and GC-6 which are less than 22 inches in diameter, will be removed, followed by management ignited prescribed fire. Following the fire, the Aspen stands in GC-5 will be tilled to stimulate Aspen sprouting. Following the fire, GC-6 will be fenced until young Aspen are established. All applicable Best Management Practices will be followed during treatment.

Allotment Boundary Adjustments

Under current management, the Granger Allotment permittee is also a permittee on the Yankee Jim Allotment. On the Yankee Jim Allotment, this permittee is authorized to graze the Mud Springs Unit, which immediately adjoins the Granger Allotment. In effect, under current management the permittee has a deferred grazing system utilizing units on two different allotments. Under the **Stewardship Alternative**, the boundary between Granger and Yankee Jim Allotments would be adjusted so that he Mud Springs Unit would become part of the Granger Allotment, along with the corresponding 52 Head Months. This boundary adjustment will facilitate livestock management and permit administration.

Wilderness

A portion of the Granger Allotment lies within the South Warner Wilderness. Under all WMRP Alternatives, the ***South Warner Wilderness Fire Management Plan*** *(1997),* would apply to the Wilderness portion of the Granger Allotment. Under the ***South Warner Wilderness Fire Management Plan***, naturally ignited fires (i.e. lightning strikes), may be allowed to burn within a specified prescription in order to allow this natural process to return to the South Warner Wilderness. When a lightning strike occurs, the District Ranger, Wilderness Manager and Fire Management personnel, will determine whether pre-determined prescription criteria can be met to allow the fire to follow its natural course within the Wilderness. The permittee on the Granger Allotment will rest the burned area from livestock grazing for 1-3 years, based upon vegetation monitoring data, to allow the natural re-establishment of post-burn vegetation.

TABLE 3-12
Granger Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See Granger Map*	*See Granger Map - move boundary to include (GC-8) Mud Springs unit from Yankee Jim Allotment, and reassign corresponding 52 HM to Granger Allotment*	
Grazing System	*Season-long*	*2 pasture Deferred*	
Numbers & Season	*90 cow/calf pairs from 6/1 to 9/15*	*90 cow/calf pairs from 6/1 to 9/15, 25 pair from 7/1 to 8/31*	
Total Head Months	*321 HM*	*373 HM*	
Utilization Standards			*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian		***Streamreaches 171 & 173*** *Herbaceous – 35%* *Browse - 20%* *Streambank - 20%* *Stubble-height-5"* ***Spring areas (GC-9 & GC-10)*** *Herbaceous – 35%* *Browse - 20%* *Stubble-height-5"*	
	All other riparian *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***All other riparian*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*	
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration *Aspen*	*NONE*	*40 acres (GC-5) remove conifers, burn, till* *60 acres (GC-6) remove conifers, burn, fence*	*40 acres (GC-5) remove conifers, burn, till* *60 acres (GC-6) remove conifers, burn, fence*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Stream Restoration	*NONE*	*NONE*	*NONE*
Range Improvements *Fence Construction*	*NONE*	*0.75 miles (GC-7, YJ-19)*	*NONE*
Permittee Actions *Fence Maintenance*	*0.25 miles*	*1.00 miles*	*0.25 miles*
Monitoring: *Annual (implementation);* *Long-term (effectiveness)*	*Low Priority, key areas on this allotment will be monitored only after all High priority allotments have been monitored* *NONE*	*A minimum of one key area will be monitored, more if funding allows. Monitoring may be full measurement or ocular* ***Minimum** of 1 benchmark in this Allotment*	*NONE* *NONE*

HENDERSON MEADOW ALLOTMENT

Three Alternatives are described for the Henderson Meadow Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

FOCUS AREAS

Riparian (Streams and Springs):

Stream reach 231 - Unsatisfactory/Functioning at Risk – This stream reach is the North Fork of Fitzhugh Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present.

Stream reach 241 - Unsatisfactory/Functioning at Risk – This stream reach is the South Fork of Fitzhugh Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present. This stream reach has water temperatures in excess of 70 degrees Fahrenheit and width-to-depth ratios in excess of 12.

Stream reach 251 - Unsatisfactory/Properly Functioning – This stream reach is Mill Creek. This stream reach exhibits less than the desired vegetative component with less than 3 hardwood species present.

Stream reach 252 - Unsatisfactory/Properly Functioning – This stream reach is Slide Creek. This stream reach exhibits less than the desired vegetative component with less than 3 hardwood species present.

Spring area HM-9 - Unsatisfactory/Functioning at Risk – This spring area is on Soup Creek. This spring exhibits very little of the desired vegetative component.

Spring area WS-9 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of the Mill Creek. This spring exhibits very little of the desired vegetative component and has recent hummocking.

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Aspen:

Aspen HM-7 – Unsatisfactory/Non-Functioning – This is an aspen stand on Fitzhugh Creek. Stand exhibits very little regeneration and is being dominated by conifers.

Seeps:

Seep HM-10 - Unsatisfactory/Functioning at Risk – This seep exhibits very little of the desired vegetative component, has recent hummocking and trampling.

Economics:

Unsatisfactory permittee costs to achieve effective livestock distribution and maintain positive control within the allotment.

ADDITIONAL INFORMATION

Rangeland Vegetation Restoration

Under the **Stewardship** and **No Grazing Alternatives,** the conifers invading Aspen area HM-7 which are less than 22 inches in diameter, will be removed, followed by management ignited prescribed fire. Following the fire, HM-7 will be fenced. All applicable Best Management Practices will be followed during treatment.

Wilderness

A portion of the Henderson Meadow Allotment lies within the South Warner Wilderness. Under all WMRP Alternatives, the ***South Warner Wilderness Fire Management Plan*** *(1997),* would apply to the Wilderness portion of the Henderson Meadow Allotment. Under the ***South Warner Wilderness Fire Management Plan***, naturally ignited fires (i.e. lightning strikes), may be allowed to burn within a specified prescription in order to allow this natural process to return to the South Warner Wilderness. When a lightning strike occurs, the District Ranger, Wilderness Manager and Fire Management personnel, will determine whether pre-determined prescription criteria can be met to allow the fire to follow its natural course within the Wilderness. The permittee on the Henderson Meadow Allotment will rest the burned area from livestock grazing for 1-3 years, based upon vegetation monitoring data, to allow the natural re-establishment of post-burn vegetation.

TABLE 3-13
Henderson Meadow Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See Henderson Meadow Map*	*See Henderson Meadow Map*	
Grazing System	*4 pasture Deferred*	*4 pasture Deferred*	
Numbers & Season	*626 cow/calf pairs from 7/1 to 9/30*	*626 cow/calf pairs from 7/1 to 9/30*	
Total Head Months	*1,920 HM*	*1,920 HM*	
Utilization Standards			*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian		***Streamreaches 231, 241, 251 & 252*** *Herbaceous – 35%* *Browse - 20%* *Streambank – 20%* *Stubble-height-5"* ***Spring areas (HM-9)*** *Herbaceous – 35%* *Browse - 20%* *Stubble-height-5"*	
	All other riparian *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***All other riparian*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*	
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	***Seep area (HM-10)*** *Herbaceous – 40%* *Browse - 20%* *Stubble-height-5"* ***All other seeps*** *Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration *Aspen*	*NONE*	*30 acres (HM-7) remove conifers, burn, fence*	*30 acres (HM-7) remove conifers, burn, fence*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Stream Restoration	*NONE*	*NONE*	*NONE*
Range Improvements *Herding Facilitation*	*NONE*	*0.25 miles (HM-8) drift fence*	*NONE*
Permittee Actions *Fence Maintenance* *Water Source Maintenance*	*23.5 miles* *22*	*23.75 miles* *22*	*23.5 miles* *22*
Monitoring: *Annual (implementation);* *Long-term (effectiveness)*	*High Priority, key areas on this allotment will be monitored using full measurement or ocular estimates* *3 benchmarks identified in this Allotment (Regional Contract)*	*A minimum number of key areas will be monitored by full measurement.* *Minimum of 3 benchmarks in this Allotment (Regional Contract)*	*NONE* *3 benchmarks identified in this Allotment (Regional Contract)*

JOSEPH CREEK ALLOTMENT

Three Alternatives are described for the Joseph Creek Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

FOCUS AREAS

Riparian (Streams and Springs):

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

TABLE 3-14
Joseph Creek Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See Joseph Creek Map*	*See Joseph Creek Map*	
Grazing System	*2 Deferred Irrigated Pastures,*	*2 Deferred Irrigated Pastures, qualifies for Early Season With Regrowth if requested*	
Numbers & Season	*40 cow/calf pairs from 7/1 to 9/15*	*40 cow/calf pairs from 7/1 to 9/15*	
Total Head Months	*104 HM*	*104 HM*	
Utilization Standards			*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian	***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***All other riparian*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*	
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration	*NONE*	*NONE*	*NONE*
Stream Restoration	*NONE*	*NONE*	*NONE*
Range Improvements	*NONE*	*NONE*	*NONE*
Permittee Actions			
Fence Maintenance	*4.6 miles*	*4.6 miles*	*NONE*
Ditch Maintenance	*1 mile*	*1 mile*	*1 mile*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Monitoring: *Annual (implementation):*	*Low Priority, key areas on this allotment will be monitored only after all High priority allotments have been monitored*	*A minimum of one key area will be monitored, more if funding allows. Monitoring may be full measurement or ocular*	*NONE*
Long-term (effectiveness)	*NONE*	*Minimum of 1 benchmark in this Allotment*	*NONE*

LASSEN CREEK ALLOTMENT

Three Alternatives are described for the Lassen Creek Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

FOCUS AREAS

Riparian (Streams and Springs):

Stream reach 91 - Unsatisfactory/Properly Functioning – This stream reach is Willow Creek. This stream reach exhibits less than the desired vegetative component with less than 3 hardwood species present.

Stream reach 103 - Unsatisfactory/Properly Functioning – This stream reach is Lassen Creek. This stream reach exhibits less than the desired vegetative component with less than 3 hardwood species present. This stream reach has width-to-depth ratios greater than 12, and water temperatures in excess of 70 degrees Fahrenheit.

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Economics:

Unsatisfactory permittee costs to achieve effective livestock distribution and maintain positive control within the allotment.

TABLE 3-15
Lassen Creek Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See Lassen Creek Map*	*See Lassen Creek Map*	
Grazing System	*Rest-Rotation, 5 deferred pastures, 2 pastures rested on alternate years*	*Rest-Rotation, 5 deferred pastures, 2 pastures rested on alternate years*	
Numbers & Season	*242 cow/calf pairs from 5/16 to 9/30*	*242 cow/calf pairs from 5/16 to 9/30*	
Total Head Months	*1,113 HM*	*1,113 HM*	
Utilization Standards			*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian		***Streamreaches 91 & 103*** *Herbaceous – 40%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*	
	All other riparian *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3"*	
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration	*NONE*	*NONE*	*NONE*
Stream Restoration	*NONE*	*NONE*	*NONE*
Physical Improvements			
Fence Construction	*NONE*	*1.25 miles (LC-3, LC-8b)*	*NONE*
Fence Reconstruction	*NONE*	*0.75 miles (F/LC-1, LC-8a)*	*NONE*
Water Developments	*NONE*	*2 (LC-5, LC-7)*	*NONE*

MOUNT BIDWELL ALLOTMENT

Three Alternatives are described for the Mount Bidwell Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

In 1997, a *Mt. Bidwell and Bidwell Allotment Management Plans Environmental Assessment* was completed and Decision Notice signed. Many of the actions included in the 1997 Decision have already been implemented, and are included as existing improvements on the **Mount Bidwell Management Practices Map**. Some of the actions included in the 1997 Decision have not yet been implemented, and are included as proposed activities for both the **Current Management** and **Stewardship Alternatives** in the **Table of Management Practices by Alternative**, and the **Management Practices Map**.

Mount Bidwell Allotment contains habitat for the threatened Warner Sucker. During completion of the 1997 Environmental Assessment, formal consultation was completed with the US Fish and Wildlife Service, who concurred on the Biological Opinion. All actions prescribed in that Biological Opinion are included in both the **Current Management** and **Stewardship Alternatives**.

FOCUS AREAS

Riparian (Streams and Springs):

Stream reach 31 - Unsatisfactory/Functioning at Risk – These stream reaches are the headwaters of Twelvemile Creek, which is habitat for the Warner sucker and the Warner Valley redband trout. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present. This stream reach has headcuts (active erosion of banks), width-to-depth ratios greater than 12, and water temperatures in excess of 70 degrees Fahrenheit.

Stream reach 32 - Unsatisfactory/Properly Functioning - This is a portion of Twelvemile Creek, which is habitat for the Warner sucker and the Warner Valley redband trout. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present.

Stream reach 33, 34 & 35 - Unsatisfactory/Functioning at Risk – These stream reaches are the headwaters of Twelvemile Creek, which is habitat for the Warner sucker and the Warner Valley redband trout. These streams reach exhibit very little of the desired vegetative component with less than 3 hardwood species present. This stream reach has headcuts and width-to-depth ratios greater than 12.

Stream reach 51 - Unsatisfactory/Functioning at Risk – This stream reach is the headwaters of Bidwell Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present. This stream reach has headcuts and width-to-depth ratios greater than 12. This stream reach also has an old logging road adjacent to it and crossing it several times. This road is causing siltation of the stream.

Stream reach 71 - Unsatisfactory/Functioning at Risk – This stream reach is Mill Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present. This stream reach has width-to-depth ratios greater than 12.

Satisfactory/Not at Desired Condition due to the decadent condition of the sagebrush, which is suppressing the expression of other desired vegetation. Lack of fire is the primary cause of the sagebrush condition.

Spring area MB-12 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of North Star Creek, which is tributary to Bidwell Creek. This spring exhibits very little of the desired vegetative component and recent hummocking is present.

Spring area MB-13 - Unsatisfactory/Functioning at Risk – This spring is the headwaters of Mill Creek. This spring exhibits very little of the desired vegetative component.

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Aspen:

Aspen MB–5 - Satisfactory/Not at Desired Condition - These aspen stands exhibit poor regeneration and are being dominated by conifers.

Upland:

Sagebrush MB-7 - Satisfactory/Not at Desired Condition due to the decadent condition of the sagebrush, which is suppressing the expression of other desired vegetation and increasing wildfire severity potential. Lack of fire is the primary cause of the sagebrush condition.

Sagebrush MB-9 & MB-10 - Satisfactory/Not at Desired Condition due to the decadent condition of the sagebrush, which is suppressing the expression of other desired vegetation and increasing wildfire severity potential. Lack of fire is the primary cause of the sagebrush condition.

Economics:

Unsatisfactory permittee costs to achieve effective livestock distribution and maintain positive control within the allotment.

ADDITIONAL INFORMATION

Rangeland Vegetation Restoration

Under the **Stewardship** and **No Grazing Alternatives,** the conifers invading Aspen area MB-5 which are less than 22 inches in diameter, will be removed, followed by management ignited prescribed fire. All applicable Best Management Practices will be followed during treatment.

Under the **Stewardship** and **No Grazing Alternatives,** the decadent sagebrush in Upland areas MB-9 and MB-10, will be treated with prescribed management ignited fire, followed by two growing seasons of rest from livestock grazing to allow re-establishment of the desired forbs and grass vegetation. All applicable Best Management Practices would be followed during treatment.

Under the **Stewardship** and **No Grazing Alternatives,** the decadent sagebrush in Upland area MB-7 will be allowed to burn with prescribed *natural* ignited fire (i.e. lightning caused), followed by two

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Permittee Actions			
Fence Maintenance	*10.25 miles*	*11.5 miles*	*10.25 miles*
Water Source Maintenance	*10*	*12*	*10*
Monitoring:			
Annual (implementation);	*Low Priority, key areas on this allotment will be monitored only after all High priority allotments have been monitored*	*A minimum of one key area will be monitored, more if funding allows. Monitoring may be full measurement or ocular*	*NONE*
Long-term (effectiveness)	*NONE*	*Minimum of 1 benchmark in this Allotment*	*NONE*

growing seasons of rest from livestock grazing to allow re-establishment of the desired forbs and grass vegetation. This fire will only occur when lightning strikes, so the year of implementation is dependent on natural processes.

Grazing Systems

Under current management the Mount Bidwell Allotment is grazed as two different geographical sections, referred to as the Main Unit and the Mill Creek Unit. The Units have separate grazing systems. Three permittees graze the Main Unit, and one of those permittees also grazes the Mill Creek Unit. Under the **Stewardship Alternative**, the Mill Creek Unit would be removed from the Mount Bidwell Allotment and become the Mill Creek Allotment, and the Head Months currently permitted on the Mill Creek Unit (442 Head Months) will become the Head Months permitted on the new Mill Creek Allotment.

Allotment Boundary Adjustments

Under the **Stewardship and No Grazing Alternatives** the boundary of the Mount Bidwell Allotment would be changed such that the Mill Creek Unit were removed from that allotment, along with the corresponding Head Months (442 Head Months). This adjustment facilitates cost-effective livestock management and administration.

TABLE 3-16
Mount Bidwell Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*Mount Bidwell and Bidwell Allotment Management Plans Environmental Assessment, May 1997, Decision Notice, 7/30/97*	*Warner Mountain Rangeland Project Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	See Mount Bidwell Map	See Mount Bidwell Map, Convert Mill Creek Unit to Mill Creek Allotment, Main Unit remains as Mount Bidwell Allotment.	See Mount Bidwell Map, Convert Mill Creek Unit to Mill Creek Allotment, Main Unit remains as Mount Bidwell Allotment. (Both Allotments in Non-Use for Resource Protection)
Grazing System	***Main Unit*** *Deferred, 2 pastures, use lower elevation pasture until 8/1, then move to high elevation pasture*	***Mount Bidwell Allotment*** *Deferred, 2 pastures, use lower elevation pasture until 8/1, then move to high elevation pasture*	
Numbers & Season	*314 cow/calf pairs from 6/16 to 9/20 (991 HM); 145 pair from 6/26 to 9/20 (410 HM)*	*314 cow/calf pairs from 6/16 to 9/20 (991 HM); 145 pair from 6/26 to 9/20 (410 HM)*	
Unit Head Months	*1,401HM*	*1,401HM*	
Grazing System	***Mill Creek Unit*** *Season-long, 140 cow/calf pairs from 6/16 to 9/20*	***Mill Creek Allotment*** *Season-long, 140 cow/calf pairs from 6/16 to 9/2*	
Unit Head Months	*442 HM*	*442 HM*	
Total Head Months	*1,843 HM*	*1,843 HM*	
Utilization Standards	***Main Unit***	***Mount Bidwell Allotment***	*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian	***Streamreach 31*** ***Years 1999-2001*** *Herbaceous – 35%* *Browse - 20%* *Streambank – 10%* *Stubble-height-NA* ***Years 2002-2004*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 10%* *Stubble-height-NA*	***Streamreaches 31*** ***Years 1999-2001*** *Herbaceous – 35%* *Browse - 20%* *Streambank – 10%* *Stubble-height-NA* ***Years 2002-2004*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 10%* *Stubble-height-NA*	

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Utilization Standards *Riparian cont.*	***Streamreach 31*** ***Years 2005+*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height-NA* ***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height - 3-5"* ***Mill Creek Unit*** ***Streamreach 71*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height - 3-5"* ***Spring area (MB-13)*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"* ***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height – 3-5"*	***Streamreaches 31*** ***Years 2005+*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height-NA* ***Streamreaches 32,33,35,51*** *Herbaceous – 35%* *Browse - 20%* *Streambank – 20%* *Stubble-height-5"* ***Spring area (MB-12)*** *Herbaceous – 35%* *Browse - 20%* *Streambank – 20%* *Stubble-height - 5"* ***All other riparian*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height - 4"* ***Mill Creek Allotment*** ***Streamreach 71*** *Herbaceous – 35%* *Browse - 20%* *Streambank – 20%* *Stubble-height - 6"* ***Spring area (MB-13)*** *Herbaceous – 35%* *Browse - 20%* *Streambank – 20%* *Stubble-height - 6"* ***All other riparian*** *Herbaceous – 40%* *Browse - 20%* *Streambank – 20%* *Stubble-height - 4"*	
Aspen	***Both Units*** *Included in Uplands*	***Both Allotments*** *Herbaceous – 50%* *Browse - 20%*	
Seeps	***Both Units*** *Included in Uplands*	***Both Allotments*** *Herbaceous – 50%* *Browse - 20%*	

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Vegetation Restoration			
Aspen	***Mill Creek Unit*** *NONE*	***Mill Creek Allotment*** *100 ac. conifer removal & burn (MB-5)*	***Mill Creek Allotment*** *100 ac. conifer removal & burn (MB-5)*
Sagebrush	***Main Unit*** *327 acres prescribed mgt. ignited fire (MB-9, MB-10)*	***Mount Bidwell Allotment*** *327 acres prescribed* ***management ignited*** *fire (MB-9, MB-10)* *1,892 acres prescribed* ***natural ignited*** *fire (MB-7)*	***Mount Bidwell Allotment*** *327 acres prescribed* ***management ignited*** *fire (MB-9, MB-10)* *1,892 acres prescribed* ***natural ignited*** *fire (MB-7)*
Stream Restoration	*NONE*	*NONE*	*NONE*
Range Improvements			
Fence Reconstruction	*4.0 miles (MB-11)*	*4.0 miles (MB-11)*	*NONE*
Water Developments	*1 (MB-1)*	*1 (MB-1)*	*NONE*
Fence Removal	*1.5 miles (MB-14)*	*1.5 miles (MB-14)*	*1.5 miles (MB-14)*
Herding Facilitation	*NONE*	*Brush stock trail, 0.6 miles (MB-6)*	*NONE*
Permittee Actions			
Fence Maintenance	*2.75 miles*	*2.75 miles*	*2.75 miles*
Water Source Maintenance	*9*	*9*	*9*
Monitoring:			
Annual (implementation)	***Main Unit*** *High Priority, key areas on this unit will be monitored using full measurement or ocular estimates*	***Mount Bidwell Allotment*** *A minimum number of key areas will be monitored by full measurement.*	***Mount Bidwell Allotment*** *NONE*
Long-term (effectiveness)	*NONE*	*Minimum of 1 benchmark*	*NONE*
Annual (implementation)	***Mill Creek Unit*** *High Priority, key areas on this unit will be monitored using full measurement or ocular estimates*	***Mill Creek Allotment*** *A minimum number of key areas will be monitored by full measurement.*	***Mill Creek Allotment*** *NONE*
Long-term (effectiveness)	*NONE*	*Minimum of 1 benchmark in this Allotment*	*NONE*

MYRTLE CREEK ALLOTMENT

Three Alternatives are described for the Myrtle Creek Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

FOCUS AREAS

Riparian (Streams and Springs):

Meadows MC-2 - Satisfactory/Not at Desired Condition due to the encroachment of conifers, which are reducing the size of the meadows, and suppressing springs, vernal pools, and the expression of other desired vegetation within the meadows.

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

ADDITIONAL INFORMATION

Rangeland Vegetation Restoration

Meadows MC-2 are being encroached upon by dense stands of young lodgepole and white pine. These meadows contain springs and vernal pools. As the trees invade the edges of the meadows, they consume tremendous amounts of water, drying the soils, suppressing the springs and vernal pools, and reducing the diversity and abundance of grasses, herbs and forbs. Under the **Stewardship** and **No Grazing Alternatives**, the conifers within 200 feet of the current meadow edge will be felled, followed by management ignited prescribed fire. All applicable Best Management Practices will be followed during treatment.

Allotment Boundary Adjustments

There are currently two permittees on the Myrtle Creek Allotment. Under current management, generally one permittee grazes north of Cottonwood Creek (146 Head Months), while the second permittee grazes south of Cottonwood Creek (50 Head Months). The Myrtle Creek permittee who grazes south of Cottonwood Creek is also a permittee on Buck Creek Allotment immediately to the south. Under the **Stewardship Alternative,** the boundary between Buck Creek and Myrtle Creek Allotments would be shifted north, such that a portion of the current Myrtle Creek Allotment would be removed from that allotment and added to the Buck Creek Allotment, along with the corresponding 50 Head Months, as displayed in **TABLE 3-17** and on the **Myrtle Creek Management Practices Map**. This adjustment will result in no net change in Head Months, and will facilitate cost-effective livestock and rangeland resource management.

TABLE 3-17
Myrtle Creek Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See Myrtle Creek Map*	*See Myrtle Creek Map Move south boundary (MC/BC-1) to Cottonwood Creek, with corresponding reassignment of 50 HM to Buck Creek Allotment*	*See Myrtle Creek Map Move south boundary (MC/BC-1) to Cottonwood Creek, with corresponding reassignment of 50 HM to Buck Creek Allotment (All HM in Non-Use for Resource Protection)*
Grazing System	*Season-long*	*Season-long*	
Numbers & Season	*55 cow/calf pairs from 6/16 to 9/30*	*41 cow/calf pairs from 6/16 to 9/30*	
Total Head Months	*196 HM*	*146 HM*	
Utilization Standards			*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian	***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***All other riparian*** *Herbaceous – 40%* *Browse - 20%* *Streambank – 20%* *Stubble-height- 4"*	
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration *Meadows*	*NONE*	*30 acres (MC-2) remove conifer, burn*	*30 acres (MC-2) remove conifer, burn*
Stream Restoration	*NONE*	*NONE*	*NONE*
Range Improvements	*NONE*	*NONE*	*NONE*
Permittee Actions			
Fence Maintenance	*2.5 miles*	*2.5 miles*	*2.5 miles*
Water Source Maintenance	*1*	*1*	*1*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Monitoring: *Annual (implementation)*	*Low Priority, key areas on this allotment will be monitored only after all High priority allotments have been monitored*	*A minimum of one key area will be monitored, more if funding allows. Monitoring may be full measurement or ocular*	*NONE*
Long-term (effectiveness)	*NONE*	*Minimum of 1 benchmark in this Allotment*	*NONE*

NORTH CREEK ALLOTMENT

Three Alternatives are described for the North Creek Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

FOCUS AREAS

Riparian (Streams and Springs):

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Economics:

Unsatisfactory permittee costs to achieve effective livestock distribution and maintain positive control within the allotment.

ADDITIONAL INFORMATION

Herding Strategies

Under the **Stewardship Alternative**, a dense stand of young fir trees which is located across a major livestock herding trail will be thinned to a wider spacing. Currently, when cattle get into this dense stand, herding control is extremely difficult. All applicable Best Management Practices will be followed during treatment. This project is identified as NC-2 in **TABLE 3-18** and on the **North Creek Management Practices Map.**

TABLE 3-18
North Creek Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No razing Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See North Creek Map*	*See North Creek Map*	
Grazing System	*2 pasture Deferred*	*2 pasture Deferred*	
Numbers & Season	*73 cow/calf pairs from 6/16 to 8/31*	*73 cow/calf pairs from 6/16 to 8/31*	
Total Head Months	*187 HM*	*187 HM*	
Utilization Standards			*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian	***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***All other riparian*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*	
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration	*NONE*	*NONE*	*NONE*
Stream Restoration	*NONE*	*NONE*	*NONE*
Range Improvements *Fence Reconstruction*	*NONE*	*Cleanout 4 cattleguards and install 1-year temporary wire gates (NC-1)*	*NONE*
Herding Facilitation	*NONE*	*Thin 20 acres of dense timber (NC-2)*	*NONE*
Permittee Actions *Fence Maintenance*	*2.5 miles*	*2.5 miles*	*2.5 miles*
Water Source Maintenance	*7*	*7*	*7*

Management Practice	Current Management Alternative	Stewardship Alternative	No razing Alternative
Monitoring: *Annual (implementation);*	*Low Priority, key areas on this allotment will be monitored only after all High priority allotments have been monitored*	*A minimum of one key area will be monitored, more if funding allows. Monitoring may be full measurement or ocular*	*NONE*
Long-term (effectiveness)	*NONE*	*Minimum of 1 benchmark in this Allotment*	*NONE*

NORTH PARKER CREEK ALLOTMENT

Three Alternatives are described for the North Parker Creek Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

FOCUS AREAS

Riparian (Streams and Springs):

Stream reach 171 - Unsatisfactory/Functioning at Risk – This stream reach is Parker Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present. This stream reach has water temperatures in excess of 70 degrees Fahrenheit. Additional temperature studies are being conducted. If they indicate water temperature is less than 70 degrees Fahrenheit, then Ecological Condition will be changed to Unsatisfactory/Properly Functioning.

Stream reach 172 - Unsatisfactory/Functioning at Risk – This stream reach is Dry Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present. This stream reach has width-to-depth ratios in excess of 12.

Stream reach 173 - Unsatisfactory/Functioning at Risk – This stream reach is Parker Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present. This stream reach has water temperatures in excess of 70 degrees Fahrenheit and width-to-depth ratios in excess of 12.

Spring area NP-10 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of the North Parker Creek. This spring exhibits very little of the desired vegetative component.

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Upland:

Sagebrush stand NP-4 - Satisfactory/Not at Desired Condition due to the decadent condition of the sagebrush, which is suppressing the expression of other desired vegetation and increasing wildfire severity potential. Lack of fire is the primary cause of the sagebrush condition.

Economics:

Unsatisfactory permittee costs to achieve effective livestock distribution and maintain positive control within the allotment.

ADDITIONAL INFORMATION

Rangeland Vegetation Restoration

Under the **Stewardship** and **No Grazing Alternatives,** the decadent sagebrush in Upland area NP-4, will treated with prescribed management ignited fire, followed by two growing seasons of rest from livestock grazing to allow re-establishment of the desired forbs and grass vegetation. All applicable Best Management Practices will be followed during treatment.

Herding Strategies

There is a dense juniper stand of approximately 20 acres near the western boundary of the allotment which causes herding problems when permittees are placing livestock onto the allotment. The juniper stand causes cattle to disperse, making it extremely difficult for the permittees to move the cattle to the intended locations. Under the **Stewardship Alternative,** all junipers over 4 feet in height in the stand will be removed. Any piles of juniper limbs created will be burned. All applicable Best Management Practices will be followed during treatment. This project is identified as NP-5 in **TABLE 3-19**, and on the **North Parker Creek Management Practices Map**.

Under current management there has been unacceptable drift by North Parker Creek livestock onto the Cedar Canyon Allotment. Under the **Stewardship Alternative**, the permittees propose to solve this problem through increased herding, in place of fence reconstruction. In years past, a fence had been constructed in the problem location, however, due to its age it would need complete reconstruction to be serviceable. In place of an investment in reconstruction, the permittees will perform increased riding, and the pieces of old fence remaining will be removed, along with two cattleguards. This fence and cattleguard removal project is identified as NP-9 in **TABLE 3-19** and on the **Management Practices Map**.

TABLE 3-19
North Parker Creek Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See North Parker Creek Map*	*See North Parker Creek Map*	
Grazing System	*6 pasture Rest-Rotation, each pasture rested 1 out of 6 years.*	*6 pasture Rest-Rotation, each pasture rested 1 out of 6 years.*	
Numbers & Season	*35 cow/calf pairs from 6/1 to 9/30, 186 pair from 6/5 to 9/30, and 148 pair from 6/16 to 9/30*	*35 cow/calf pairs from 6/1 to 9/30, 186 pair from 6/5 to 9/30, and 148 pair from 6/16 to 9/30*	
Total Head Months	*1,402 HM*	*1,402 HM*	
Utilization Standards			*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian		***Streamreaches 171, 172 & 173*** *Herbaceous – 35%* *Browse - 20%* *Streambank – 20%* *Stubble-height-5"* ***Spring area (NP-10)*** *Herbaceous – 35%* *Browse - 20%* *Stubble-height-5"*	
	All other riparian *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3"*	
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration *Sagebrush*	*NONE*	*108 acres (NP-4) burn*	*108 acres (NP-4) burn*
Stream Restoration	*NONE*	*NONE*	*NONE*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Range Improvements			
Fence Construction	*NONE*	*1 cattleguard (NP-9)*	*NONE*
Water Development	*NONE*	*4 (NP-3a, NP-3b)*	*NONE*
Fence Removal	*NONE*	*2.0 miles (NP-9)*	*2.0 miles (NP-9)*
Herding			
Facilitation	*NONE*	*20 acres (NP-5) Remove brush and shrubs in gathering area 2.0 miles (NP-6) Remove brush and shrubs on herding trail*	*NONE*
Permittee Actions			
Fence Maintenance	*3.1 miles*	*1.1 miles*	*1.1 miles*
Water Source Maintenance	*8*	*12*	*8*
Extra Herding	*NONE*	*Extra herding (NP-8) to keep cattle out of treated aspen stands*	*NONE*
Monitoring:			
Annual (implementation):	*High Priority, key areas on this allotment will be monitored using full measurement or ocular estimates*	*A minimum number of key areas will be monitored by full measurement.*	*NONE*
Long-term (effectiveness)	*NONE*	*Minimum of 1 benchmark in this Allotment*	*NONE*

OUTLET ALLOTMENT

Three Alternatives are described for the Outlet Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

FOCUS AREAS

Riparian (Streams and Springs):

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Upland:

Juniper OU-5 - Satisfactory/Not at Desired Condition due to the predominance of juniper trees on the site, which are suppressing the expression of other desired vegetation and increasing wildfire severity potential. Lack of fire is the primary cause of the current condition.

Economics:

Unsatisfactory permittee costs to achieve effective livestock distribution and maintain positive control within the allotment.

ADDITIONAL INFORMATION

Rangeland Vegetation Restoration

Under the **Stewardship** and **No Grazing Alternatives,** Juniper area OU-5, which includes approximately 4,000 acres on Outlet Allotment, 4,603 acres on West Valley Allotment, and 263 acres on Parsnip Allotment, will be allowed to burn with prescribed *natural* ignited fire (i.e. lightning caused), followed by two growing seasons of rest from livestock grazing to allow re-establishment of the desired forbs and grass vegetation. This fire will only occur when lightning strikes, so the year of implementation is dependent on natural processes. This project area has natural geological features, existing roads, and other vegetation type change characteristics that will facilitate the use of appropriate fire suppression strategies and maintain low to moderate intensity fire. In addition to rangeland restoration, another purpose of the project is to reduce wildfire severity potential by allowing naturally ignited fires to burn under prescribed conditions.

TABLE 3-20
Outlet Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See Outlet Map*	*See Outlet Map*	
Grazing System	*3 pasture Deferred, early*	*3 pasture Deferred, Early-Season With Regrowth*	
Numbers & Season	*173 cow/calf pairs from 5/1 to 6/30, 55 pair from 5/15 to 6/30*	*173 cow/calf pairs from 5/1 to 6/30, 55 pair from 5/15 to 6/30*	
Total Head Months	*436 HM*	*436 HM*	
Utilization Standards			*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian	***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***All other riparian*** *Herbaceous – 55%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3"*	
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration *Juniper*	*NONE*	*4,000 acres (OU-5)prescribed **natural ignited** fire*	*4,000 acres(OU-5)prescribed **natural ignited** fire*
Stream Restoration	*NONE*	*NONE*	*NONE*
Range Improvements *Fence Construction*	*NONE*	*1 cattleguard (OU-4)*	*NONE*
Fence Reconstruction	*NONE*	*1 cattleguard (WV-5)*	*NONE*
Permittee Actions *Fence Maintenance*	*13.25 miles*	*13.25 miles*	*13.25 miles*
Water Source Maintenance	*3*	*3*	*3*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Monitoring: *Annual (implementation);* *Long-term (effectiveness)*	*Low Priority, key areas on this allotment will be monitored only after all High priority allotments have been monitored* *NONE*	*A minimum of one key area will be monitored, more if funding allows. Monitoring may be full measurement or ocular* *Minimum of 1 benchmark in this Allotment*	*NONE* *NONE*

PARSNIP ALLOTMENT

Three Alternatives are described for the Parsnip Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

FOCUS AREAS

Riparian (Streams and Springs):

Stream reach 325 - Unsatisfactory/Properly Functioning – This stream reach is Parsnip Creek. This stream reach exhibits less than the desired vegetative component with less than 3 hardwood species present.

Stream reach 331 - Unsatisfactory/Properly Functioning – This stream reach is Parsnip Creek. This stream reach exhibits less than the desired vegetative component with less than 3 hardwood species present.

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Upland:

Juniper OU-5 - Satisfactory/Not at Desired Condition due to the predominance of juniper trees on the site, which are suppressing the expression of other desired vegetation and increasing wildfire severity potential. Lack of fire is the primary cause of the current condition.

Economics:

Unsatisfactory permittee costs to achieve effective livestock distribution and maintain positive control within the allotment.

ADDITIONAL INFORMATION

Rangeland Vegetation Restoration

Under the **Stewardship** and **No Grazing Alternatives,** Juniper area OU-5, which includes approximately 4,000 acres on Outlet Allotment, 4,603 acres on West Valley Allotment, and 263 acres on Parsnip Allotment, will be allowed to burn with prescribed *natural* ignited fire (i.e. lightning caused), followed by two growing seasons of rest from livestock grazing to allow re-establishment of the desired forbs and grass vegetation. This fire will only occur when lightning strikes, so the year of implementation is dependent on natural processes. This project area has natural geological features, existing roads, and other vegetation type change characteristics that will facilitate the use of appropriate fire suppression strategies and maintain low to moderate intensity fire. In addition to rangeland restoration, another purpose of the project is to reduce wildfire severity potential by allowing naturally ignited fires to burn under prescribed conditions.

TABLE 3-21
Parsnip Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See Parsnip Map*	*See Parsnip Map*	
Grazing System	*2 pasture Deferred*	*2 pasture Deferred*	
Numbers & Season	*15 cow/calf pairs from 5/1 to 9/30, and 50 pair from 7/1 to 9/30*	*15 cow/calf pairs from 5/1 to 9/30, and 50 pair from 7/1 to 9/30*	
Total Head Months	*229 HM*	*229 HM*	
Utilization Standards			*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian		***Streamreaches 325 & 331*** *Herbaceous – 35%* *Browse - 20%* *Streambank - 20%* *Stubble-height-5"*	
	All other riparian *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***All other riparian*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*	
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration *Juniper*	*NONE*	*263 acres (OU-5) prescribed* ***natural ignited*** *fire*	*263 acres (OU-5) prescribed* ***natural ignited*** *fire*
Stream Restoration	*NONE*	*NONE*	*NONE*
Physical Improvements *Fence Reconstruction*	*NONE*	*0.5 miles (WV-6)*	*NONE*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Permittee Actions *Fence Maintenance* *Water Source Maintenance*	*9.25 miles* *8*	*9.25 miles* *8*	*9.25 miles* *8*
Monitoring: *Annual (implementation);* *Long-term (effectiveness)*	*Low Priority, key areas on this allotment will be monitored only after all High priority allotments have been monitored* *NONE*	*A minimum of one key area will be monitored, more if funding allows. Monitoring may be full measurement or ocular* *Minimum of 1 benchmark in this Allotment*	*NONE* *NONE*

SELIC ALLOTMENT

Three Alternatives are described for the Selic Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

FOCUS AREAS

Riparian (Streams and Springs):

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Upland:

Sagebrush BR-8 - Satisfactory/Not at Desired Condition due to the decadent condition of the sagebrush, which is suppressing the expression of other desired vegetation and increasing wildfire severity potential. Lack of fire is the primary cause of the sagebrush condition.

ADDITIONAL INFORMATION

Rangeland Vegetation Restoration

Under the **Stewardship** and **No Grazing Alternatives,** the decadent sagebrush in Upland area BR-8, will be treated with prescribed management ignited fire, followed by two growing seasons of rest from livestock grazing to allow re-establishment of the desired forbs and grass vegetation. All applicable Best Management Practices will be followed during treatment.

Grazing Systems

Permittees on this allotment currently employ a full-time sheep herder.

TABLE 3-22
Selic Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*Bear Camp and Selic Allotment Management Plans-Environmental Assessment, April 1995, Decision Notice, 4/18/95*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See Selic Map*	*See Selic Map*	
Grazing System	*Deferred, mid-season, move ¼ to ½ mile daily, bedding grounds used once, no bedding in aspen stands*	*Deferred, mid-season, move ¼ to ½ mile daily, bedding grounds used once, no bedding in aspen stands*	
Numbers & Season	*1,000 ewe/lamb pairs from 7/16 to 8/15*	*1,000 ewe/lamb pairs from 7/16 to 8/15*	
Total Head Months	*1,000 HM Sheep*	*1,000 HM Sheep*	
Utilization Standards			*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian	***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***All other riparian*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*	
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration *Sagebrush*	*152 acres (BR-8) burn*	*152 acres (BR-8) burn*	*152 acres (BR-8) burn*
Stream Restoration	*NONE*	*NONE*	*NONE*
Range Improvements	*NONE*	*NONE*	*NONE*
Permittee Actions			
Fence Maintenance	*2.5 miles*	*2.5 miles*	*2.5 miles*
Water Source Maintenance	*5*	*5*	*5*
Extra Herding	*Full-time Sheep Herder*	*Full-time Sheep Herder*	*NONE*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Monitoring: *Annual (implementation);*	*Low Priority, key areas on this allotment will be monitored only after all High priority allotments have been monitored*	*A minimum of one key area will be monitored, more if funding allows. Monitoring may be full measurement or ocular*	*NONE*
Long-term (effectiveness)	*NONE*	*Minimum of 1 benchmark in this Allotment*	*NONE*

THOMS CREEK ALLOTMENT

Three Alternatives are described for the Thoms Creek Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing.** Forest Service direction generated inclusion of these Alternatives.

FOCUS AREAS

Riparian (Streams and Springs):

Stream reach 141 - Unsatisfactory/Non-Functioning – This is Thoms Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present. This reach has headcuts and downcutting.

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Upland:

Sagebrush TC-2 - Satisfactory/Not at Desired Condition due to the decadent condition of the sagebrush, which is suppressing the expression of other desired vegetation and increasing wildfire severity potential. Lack of fire is the primary cause of the sagebrush condition.

ADDITIONAL INFORMATION

Rangeland Vegetation Restoration

Under the **Stewardship** and **No Grazing Alternatives,** the decadent sagebrush in Upland area TC-2, will be treated with prescribed management ignited fire, followed by two growing seasons of rest from livestock grazing to allow re-establishment of the desired forbs and grass vegetation. All applicable Best Management Practices will be followed during treatment.

Grazing Systems

Under current management there are two permittees on Thoms Creek Allotment, who graze their livestock on two different geographical sections of the Allotment, referred to as the North and South Units. The Units have separate grazing systems. Under the **Stewardship Alternative,** the permittees would continue to operate on the two separate Units, with separate grazing systems.

TABLE 3-23
Thoms Creek Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See Thoms Creek Map*	*See Thoms Creek Map - Minor boundary adjustment in the vicinity of Cedar Mtn. (BM-9).*	
Grazing System	***North Unit*** *Season-long*	***North Unit*** *Season-long*	
Numbers & Season	*47 cow/calf pairs from 6/16 to 9/30, 31 pair 8/1 to 9/30*	*47 cow/calf pairs from 6/16 to 9/30, 31 pair 8/1 to 9/30*	
Unit Head Months	*231 HM*	*231 HM*	
Grazing System	***South Units*** *Season-long*	***South Unit*** *Season-long*	
Numbers & Season	*37 cow/calf pairs from 6/16 to 9/15*	*37 cow/calf pairs from 6/16 to 9/15*	
Unit Head Month	*113 HM*	*113 HM*	
Total Head Months	*344 HM*	*344 HM*	
Utilization Standards			*NONE*
Uplands	***Both Units*** *Herbaceous – 50%* *Browse - 20%*	***Both Units*** *Herbaceous – 50%* *Browse - 20%*	
Riparian	***North Unit*** ***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***North Unit*** ***All other riparian*** *Herbaceous – 40%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*	

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Utilization Standards *Riparian cont.*	***South Unit*** ***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***South Unit*** ***Streamreach 141*** *Herbaceous – 0%* *Browse - 0%* *Streambank – 0%* *Stubble-height-NA* ***All other riparian*** *Herbaceous – 40%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*	
Aspen	***Both Units*** *Included in Uplands*	***Both Units*** *Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration *Sagebrush*	***North Unit*** *NONE*	***North Unit*** *85 acres (TC-2) burn*	***North Unit*** *85 acres (TC-2) burn*
Stream Restoration	*NONE*	*NONE*	*NONE*
Range Improvements	*NONE*	*NONE*	*NONE*
Permittee Actions *Fence maintenance* *Water Source Maintenance*	***North Unit-*** *1 mile* ***North Unit*** *1* ***South Unit*** *2*	***North Unit*** *1 mile* ***North Unit*** *1* ***South Unit*** *2*	***North Unit*** *1 mile* ***North Unit*** *1* ***South Unit*** *2*
Monitoring: *Annual (implementation):* *Long-term (effectiveness)*	*Low Priority, key areas on this allotment will be monitored only after all High priority allotments have been monitored* *NONE*	*A minimum of one key area will be monitored, more if funding allows. Monitoring may be full measurement or ocular* *Minimum of 1 benchmark in this Allotment*	*NONE* *NONE*

WEST VALLEY ALLOTMENT

Three Alternatives are described for the West Valley Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

FOCUS AREAS

Riparian (Streams and Springs):

Stream reach 325 - Unsatisfactory/Properly Functioning – This stream reach is Parsnip Creek. This stream reach exhibits less than the desired vegetative component with less than 3 hardwood species present.

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Upland:

Juniper WV-2 - Satisfactory/Not at Desired Condition due to the predominance of juniper trees on the site, which are suppressing the expression of other desired vegetation and increasing wildfire severity potential. Lack of fire is the primary cause of the current condition.

Juniper OU-5 - Satisfactory/Not at Desired Condition due to the predominance of juniper trees on the site, which are suppressing the expression of other desired vegetation and increasing wildfire severity potential. Lack of fire is the primary cause of the current condition.

Economics:

Unsatisfactory permittee costs to achieve effective livestock distribution and maintain positive control within the allotment.

ADDITIONAL INFORMATION

Rangeland Vegetation Restoration

Under the **Stewardship** and **No Grazing Alternatives,** in Juniper area WV-2, all junipers over 1" in diameter at the base, will be cut down, and the limbs and tops cut off and scattered. The juniper cutting will be followed by prescribed *management* ignited fire. All applicable Best Management Practices will be followed during treatment. Within WV-2, juniper leave areas approximately ¼ to ½ acre in size will not be treated to create wildlife habitat diversity. These leave areas will cover an estimated 2% of the WV-2 area. In addition to rangeland restoration, another purpose of the project is to reduce wildfire severity potential.

Under the **Stewardship** and **No Grazing Alternatives,** Juniper area OU-5, which includes approximately 4,000 acres on Outlet Allotment, 4,603 acres on West Valley Allotment, and 263 acres on Parsnip Allotment, will be allowed to burn with prescribed *natural* ignited fire (i.e. lightning caused), followed by two growing seasons of rest from livestock grazing to allow re-

establishment of the desired forbs and grass vegetation. This fire will only occur when lightning strikes, so the year of implementation is dependent on natural processes. This project area has natural geological features, existing roads, and other vegetation type change characteristics that will facilitate the use of appropriate fire suppression strategies and maintain low to moderate intensity fire. In addition to rangeland restoration, another purpose of the project is to reduce wildfire severity potential by allowing naturally ignited fires to burn under prescribed conditions.

TABLE 3-24
West Valley Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See West Valley Map*	*See West Valley Map*	
Grazing System	*2 pasture Deferred, early*	*3 pasture Deferred, all Early Season With Regrowth*	
Numbers & Season	*315 cow/calf pairs from 5/1 to 6/30*	*315 cow/calf pairs from 5/1 to 6/30*	
Total Head Months	*436 HM*	*436 HM*	
Utilization Standards			*NONE*
Uplands	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	
Riparian		***Streamreach 325*** *Herbaceous – 45%* *Browse - 20%* *Streambank - 20%* *Stubble-height-4"*	
	All other riparian *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***All other riparian*** *Herbaceous – 55%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3"*	
Aspen	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration *Juniper*	*NONE*	*1,638 acres (WV-2)remove juniper, prescribed **management ignited** fire* *4,603 acres (OU-5)prescribed **natural ignited** fire*	*1,638 acres (WV-2)remove juniper, prescribed **management ignited** fire* *4,603 acres(OU-5)prescribed **natural ignited** fire*
Stream Restoration	*NONE*	*NONE*	*NONE*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Range Improvements			
Fence Construction	*NONE*	*2.5 miles (WV-7)*	*NONE*
Fence Reconstruction	*NONE*	*0.5 miles and 1 cattleguard (WV-5, WV-6)*	*NONE*
Water Developments	*NONE*	*4 (WV-3, WV-4)*	*NONE*
Permittee Actions			
Fence Maintenance	*3.75 miles*	*6.25 miles*	*3.75 miles*
Water Source Maintenance	*8*	*12*	*8*
Monitoring:			
Annual (implementation);	*Low Priority, key areas on this allotment will be monitored only after all High priority allotments have been monitored*	*A minimum of one key area will be monitored, more if funding allows. Monitoring may be full measurement or ocular*	*NONE*
Long-term (effectiveness)	*NONE*	*Minimum of 1 benchmark in this Allotment*	*NONE*

WILDERNESS SHEEP ALLOTMENTS

Four Alternatives are described for the Wilderness Sheep Allotments: **Current Management** (No Action); **Stewardship; No Grazing;** and the **Wilderness Sheep Adaptive Management Alternative**. Forest Service direction generated inclusion of these Alternatives. The **Stewardship Alternative** reflects information available when the Proposed Action was originally developed. The **Wilderness Sheep Adaptive Management Alternative** reflects significant new resource condition data acquired after the Proposed Action was circulated for public scoping. This new data resulted in the development of an Alternative that was significantly different from the **Stewardship Alternative** for the Wilderness Sheep Allotments. The **Wilderness Sheep Adaptive Management Alternative** was developed in a collaborative effort between the Forest Service and the grazing permittee. The **Current Management** and **Stewardship Alternatives** are displayed on the **Wilderness Sheep Allotments Management Practices Map**. The Wilderness Sheep Adaptive Management Alternative is displayed on the **Wilderness Sheep Adaptive Management Alternative Map**.

FOCUS AREAS

Riparian (Streams and Springs):

Stream reach 251 - Unsatisfactory/Properly Functioning – This stream reach is Mill Creek. This stream reach exhibits less than the desired vegetative component with less than 3 hardwood species present.

Stream reach 252 - Unsatisfactory/Properly Functioning – This stream reach is Slide Creek. This stream reach exhibits less than the desired vegetative component with less than 3 hardwood species present.

Spring area WS-8 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of the Cottonwood Creek, near Patterson Lake. This spring exhibits very little of the desired vegetative component and has recent hummocking.

Spring area WS-9 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of the Mill Creek. This spring exhibits very little of the desired vegetative component and has recent hummocking.

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Aspen:

Aspen WS-5 – Unsatisfactory/Functioning at Risk - These aspen stands, located in the South Warner Wilderness, are experiencing a lack of regeneration.

Upland:

Bitterbrush BR-15 - **Satisfactory/Not at Desired Condition** due to the predominance of juniper trees on the site. which are suppressing the health and vigor of bitterbrush and increasing wildfire

severity potential. Lack of fire is the primary cause of the current condition. This bitterbrush stand is located outside of the South Warner Wilderness.

Sagebrush WS-10 – Uncertain if Unsatisfactory or Satisfactory/Not at Desired Condition – Decadent condition of the sagebrush is suppressing the expression of other desired vegetation and increasing wildfire severity potential. Lack of fire is the primary cause of the sagebrush condition.

Economics:

Unsatisfactory permittee costs to achieve effective livestock distribution and maintain positive control within the allotment.

ADDITIONAL INFORMATION

Rangeland Vegetation Restoration

Under the **Stewardship, No Grazing Alternative, and Adaptive Management Alternatives,** in Bitterbrush area BR-15 which lies outside the South Warner Wilderness, all junipers will be cut down, and the limbs and tops cut off and scattered. In addition, every third mountain mahogany plant which is over-mature, with its green growth too high for deer to browse, will have its main stem cut to stimulate sprouting lower down. The cutting will be followed by prescribed management ignited fire, and then the area will be rested from livestock grazing for two growing seasons to allow re-establishment of the desired forbs and grass vegetation. All applicable Best Management Practices will be followed during treatment. Bitterbrush is susceptible to high intensity fire. The juniper cutting, following by prescribed management ignited fire, will facilitate the maintenance of low intensity fire. In addition to rangeland restoration, another purpose of the project is too reduce wildfire severity potential.

Grazing Systems

Permittees on this allotment currently employ a full-time sheep herder.

Allotment Boundary Adjustments

Under the **Stewardship Alternative,** the Wilderness Sheep Allotments would remain as three separate allotments, however, the Cottonwood-Owl Allotment would be expanded to include an area removed from that allotment in prior years to facilitate Bighorn Sheep reintroduction. Due to disease concerns, no Bighorn Sheep reintroductions are planned by the California Department of Fish and Game into the South Warner Wilderness in the foreseeable future. Also, under the **Stewardship Alternative**, the boundaries between the Cottonwood-Owl and Mill-Eagle, and the Mill-Eagle and Eagle-Barber Allotments, would be shifted, as shown on **Wilderness Sheep Allotments Management Practices Map**. This shift would facilitate livestock management and administration of the three separate allotments.

Under the **Wilderness Sheep Adaptive Management Alternative,** all three current allotments would be combined into one allotment, named the Wilderness Sheep Allotment. The combined number of sheep currently permitted on the three allotments, would become the number of sheep indicated on the new combined Wilderness Sheep Allotment permit, however, actual numbers authorized each grazing season would be according to the **Adaptive Management Alternative** as

described in this section and displayed in **TABLE 3-25**. Combining the three allotments into one allotment would greatly facilitate adaptive management flexibility over the area.

Monitoring

Under the **Adaptive Management Alternative,** for Aspen areas WS-5 and Upland area WS-10, pre-season utilization measurements will be collected in key areas, and these key areas will be monitored when livestock leave these areas, to ensure livestock utilization standards are adhered to.

Adaptive Management

Currently there is some uncertainty regarding upland resource conditions in WS-10. The **Adaptive Management Alternative** proposes to deal with this uncertainty through an adaptive management grazing strategy. In June 2000, the Forest Service and the Permittee will work together to collect upland resource condition data in WS-10. Based upon this data, upland utilization standards for WS-10 will be implemented for the first 3-5 years. Then condition monitoring data will be collected again after 3-5 years. Based upon this data, upland utilization standards in WS-10 will be adjusted as appropriate for the years remaining under the permit.

Wilderness

The Wilderness Sheep Allotments are almost entirely contained within the South Warner Wilderness. A small portion of the Eagle-Barber Allotment is outside the Wilderness. The ***South Warner Wilderness Fire Management Plan*** *(1997),* would apply to all portions of the allotments within the Wilderness, in all Alternatives. Under the ***Plan***, naturally ignited fires (i.e. lightning strikes), may be allowed to burn within a specified prescription in order to allow this natural process to return to the South Warner Wilderness. When a lightning strike occurs, the District Ranger, Wilderness Manager and Fire Management personnel, will determine whether pre-determined prescription criteria can be met to allow the fire to follow its natural course within Wilderness. The permittee on the Wilderness Sheep Allotments will rest the burned area from livestock grazing for 1-3 years, based upon vegetation monitoring data, to allow the natural re-establishment of post-burn vegetation.

TABLE 3-25
Wilderness Sheep Allotments
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative	Adaptive Management Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection	
Boundaries	*See Wilderness Sheep Allotments Management Practices Map*	*See Wilderness Sheep Allotments Management Practices Map -* *Reincorporates a portion of Cottonwood Canyon previously removed for Bighorn Sheep (WS-7); minor boundary changes between the 3 Wilderness Sheep Allotments (WS-7)*		*See Wilderness Sheep Adaptive Management Alternative Map -* *Does not reincorporate a portion of Cottonwood Canyon area previously removed for Bighorn Sheep (WS-7); combines all 3 allotments into one allotment to be named the Wilderness Sheep Allotment*
Grazing System	*Deferred, mid-season, move ¼ to ½ mile daily, bedding grounds used once, no bedding in aspen stands. 3 separate allotments, 3 separate bands of sheep*	*Deferred, mid-season, move ¼ to ½ mile daily, bedding grounds used once, no bedding in aspen stands. 3 separate allotments, 3 separate bands of sheep*		*Deferred, mid-season, move ¼ to ½ mile daily, bedding grounds used once, no bedding in aspen stands. 1 allotment, 3 separate bands of sheep*
Numbers & Season	*1,000 ewe/lamb pairs from 7/1 to 7/31 (31 days), 1,000 pair from 7/6 to 8/20 (46 days), 1,000 pair from 7/5 to 8/6 (33 days)*	*1,000 ewe/lamb pairs for 31 days, 1,000 pair for 46 days, 1,000 pair for 33 days. This use will occur between 7/1 and 8/31, as agreed upon by Forest Service and Permittee*		*3,000 ewe/lamb pairs for 30 days, this use will occur between 7/1 and 8/31, as agreed upon by Forest Service and Permittee;* ***After first 3-5 years, Long-Term Monitoring; if trend is appropriate, then,*** *1,000 ewe/lamb pairs for 31 days, 1,000 pair for 46 days, 1,000 pair for 33 days) , as agreed upon by Forest Service and Permittee*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative	Adaptive Management Alternative
Grazing Strategies (continued) *Total Head Months*	*3,616 HM Sheep*	*3,616 HM Sheep*		***First 3-5 years*** *2,959 HM Sheep* ***After first 3-5 years*** *3,616 HM Sheep*
Utilization Standards *Uplands*	*Herbaceous – 50%* *Browse - 20%*	*Herbaceous – 50%* *Browse - 20%*	*NONE*	***Upland area (WS-10) if Unsatisfactory*** *Herbaceous – 30%* *Browse - 20%* ***Upland area (WS-10) if Satisfactory*** *Herbaceous – 50%* *Browse - 20%* ***All other uplands*** *Herbaceous – 50%* *Browse - 20%*
Riparian	***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***Streamreaches 251 & 252*** *Herbaceous – 35%* *Browse - 20%* *Streambank - 20%* *Stubble-height-5"* ***Spring areas (WS-8 & WS-9)*** *Herbaceous – 45%* *Browse - 20%* *Stubble-height-4"* ***All other riparian*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*		***Streamreaches 251 & 252*** *Herbaceous – 35%* *Browse - 20%* *Streambank - 20%* *Stubble-height-5"* ***Spring areas (WS-8 & WS-9)*** *Herbaceous – 45%* *Browse - 20%* *Stubble-height-4"* ***All other riparian*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*
Aspen	*Included in Uplands*	***Aspen stands (WS-5)*** *Herbaceous – 30%* *Browse - 20%* ***All other Aspen stands*** *Herbaceous – 50%* *Browse - 20%*		***Aspen stands (WS-5) for 3 to 5 years*** *Herbaceous – 0%* *Browse - 0%* ***All other Aspen stands*** *Herbaceous – 50%* *Browse - 20%*
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*		*Herbaceous – 50%* *Browse - 20%*
Vegetation Restoration	*NONE*	*50 acres (BR-15) remove juniper, prune mahogany, burn*	*50 acres (BR-15) remove juniper, prune mahogany, burn*	*50 acres (BR-15) remove juniper, prune mahogany, burn*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative	Adaptive Management Alternative
Stream Restoration	*NONE*	*NONE*	*NONE*	*NONE*
Range Improvements	*NONE*	*NONE*	*NONE*	*NONE*
Permittee Actions *Extra Herding*	*Full-time Sheep Herder*	*Full-time Sheep Herder*	*Full-time Sheep Herder*	*Full-time Sheep Herder*
Monitoring: *Annual (implementation):* *Long-term (effectiveness)*	*High Priority, key areas on this allotment will be monitored using full measurement or ocular estimates* *2 benchmarks identified within the 3 allotments (Regional Contract)*	*A minimum number of key areas will be monitored by full measurement.* *Minimum of 2 benchmarks in this Allotment (Regional Contract)*	*NONE* *2 benchmarks identified within the 3 allotments (Regional Contract)*	*Pre-season monitoring to determine amount of wildlife use on browse species or aspen* *A minimum number of key areas will be monitored by full measurement.* *Benchmarks in aspen and uplands in this Allotment as identified in June 2000 field visit, in addition to the 2 benchmarks identified for Regional Contract*

YANKEE JIM ALLOTMENT

Three Alternatives are described for the Yankee Jim Allotment: **Current Management** (No Action); **Stewardship**; and **No Grazing**. Forest Service direction generated inclusion of these Alternatives.

FOCUS AREAS

Riparian (Streams and Springs):

Stream reach 211 - Unsatisfactory/Functioning at Risk – This stream reach is the Middle Fork of Pine Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present. This stream reach has width-to-depth ratios in excess of 12.

Stream reach 231 - Unsatisfactory/Functioning at Risk – This stream reach is the North Fork of Fitzhugh Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present.

Stream reach 241 - Unsatisfactory/Functioning at Risk – This stream reach is the South Fork of Fitzhugh Creek. This stream reach exhibits very little of the desired vegetative component with less than 3 hardwood species present. This stream reach has water temperatures in excess of 70 degrees Fahrenheit and width-to-depth ratios in excess of 12.

Spring area YJ-6 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of the North Fork of Pine Creek. This spring exhibits very little of the desired vegetative component, and has recent hummocking and increased water temperatures.

Spring area YJ-9 - Unsatisfactory/Functioning at Risk – This spring area is the headwaters of the North Fork of Fitzhugh Creek. This spring exhibits very little of the desired vegetative component and has recent hummocking.

All Other Riparian - Satisfactory/Properly Functioning - These riparian areas are not moving towards desired condition at an appropriate rate based upon Forest monitoring and current scientific information.

Upland:

Mahogany YJ-15 - Satisfactory/Not at Desired Condition due to the decadent condition of the mountain mahogany, which creates a condition where the new growth is too high for deer to access and increasing wildfire severity potential. Lack of fire is the primary cause of the mahogany condition.

Economics:

Unsatisfactory permittee costs to achieve effective livestock distribution and maintain positive control within the allotment.

ADDITIONAL INFORMATION

Rangeland Vegetation Restoration

Under the **Stewardship** and **No Grazing Alternatives,** prescribed management ignited fire will be implemented in Mahogany area YJ-15 to restore vegetation diversity. All applicable Best Management Practices will be followed during treatment. In addition to rangeland restoration, another purpose of the project is to reduce wildfire severity potential.

Grazing Systems

Under current management there are four permittees on Yankee Jim Allotment. Two permittees graze their livestock in common on the Main Unit. One permittee grazes only on the Nelson Unit, and another permittee grazes on only the Mud Springs Unit. Under the **Stewardship Alternative** permittees would continue to graze separately on the Main and Nelson Units, however, the Mud Springs Unit would be reassigned to the Granger Allotment. See the **Allotment Boundary Adjustments** section below.

Range Improvements

Under the **Stewardship Alternative**, for water development project YJ-13, all conifer trees less than 22" in diameter at 4.5' above ground, within a distance of approximately 200 feet of the spring, will be cut down. All applicable Best Management Practices will be followed during treatment.

Allotment Boundary Adjustments

Under current management, the Yankee Jim permittee who grazes the Mud Springs Unit, is also the permittee on the Granger Allotment, which immediately adjoins the Mud Springs Unit. In effect, under current management this permittee has a Deferred grazing system utilizing Units on two different allotments. Under the **Stewardship Alternative**, the boundary between Granger and Yankee Jim Allotments would be adjusted so that he Mud Springs Unit would become part of the Granger Allotment, instead of the Yankee Jim Allotment, along with the corresponding 52 Head Months. This boundary adjustment will facilitate livestock management and permit administration.

Wilderness

A portion of the Yankee Jim Allotment lies within the South Warner Wilderness. Under all WMRP Alternatives, the ***South Warner Wilderness Fire Management Plan*** *(1997),* would apply to the Wilderness portion of the Yankee Jim Allotment. Under the ***South Warner Wilderness Fire Management Plan***, naturally ignited fires (i.e. lightning strikes), may be allowed to burn within a specified prescription in order to allow this natural process to return to the South Warner Wilderness. When a lightning strike occurs, the District Ranger, Wilderness Manager and Fire Management personnel, will determine whether pre-determined prescription criteria can be met to allow the fire to follow its natural course within the Wilderness. The permittee on the Yankee Jim Allotment will rest the burned area from livestock grazing for 1-3 years, based upon vegetation monitoring data, to allow the natural re-establishment of post-burn vegetation.

TABLE 3-26
Yankee Jim Allotment
Warner Mountain Rangeland Project

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Environmental Documentation and Decision	*NONE*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*	*Warner Mountain Rangeland Project-Environmental Assessment, July 2000, Decision Notice, Sept 2000*
Grazing Strategies			Non-Use for Resource Protection
Boundaries	*See Yankee Jim Map*	*See Yankee Jim Map – move allotment boundary (GC-8) so that Mud Springs Unit moves to Granger Allotment, and reassign corresponding HM from Yankee Jim Allotment to Granger Allotment*	
Grazing System	***Main Unit*** *3 pasture Deferred*	***Main Unit*** *3 pasture Deferred*	
Numbers & Season	*649 cow/calf pairs from 7/1 to 9/20*	*649 cow/calf pairs from 7/1 to 9/20*	
Unit Head Months	*1,774 HM*	*1,774 HM*	
Grazing System	***Nelson Unit***	***Nelson Unit***	
Numbers & Season	*4 pair from 7/1 to 9/30*	*4 pair from 7/1 to 9/30*	
Unit Head Months	*12 HM*	*12 HM*	
Grazing System	***Mud Springs Unit***		
Numbers & Season	*25 pair from 7/1 to 8/31*		
Unit Head Months	*52 HM*		
Total Head Months	*1,838 HM*	*1,786 HM*	
Utilization Standards			*NONE*
Uplands	***All Units*** *Herbaceous – 50%* *Browse - 20%*	***All Units*** *Herbaceous – 50%* *Browse - 20%*	
Riparian	***Main Unit***	***Main Unit*** ***Streamreaches 211, 231 & 241*** *Herbaceous – 35%* *Browse - 20%* *Streambank – 20%* *Stubble-height-5"*	

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Utilization Standards *Riparian cont.*	***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"* ***Nelson Unit*** ***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"* ***Mud Springs Unit*** ***All other riparian*** *Herbaceous – 50%* *Browse - 20%* *Streambank – 20%* *Stubble-height-3-5"*	***Spring areas (YJ-6, YJ-9)*** *Herbaceous – 35%* *Browse - 20%* *Stubble-height-5"* ***All other riparian*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"* ***Nelson Unit*** ***All other riparian*** *Herbaceous – 45%* *Browse - 20%* *Streambank – 20%* *Stubble-height-4"*	
Aspen	***All Units*** *Included in Uplands*	***All Units*** *Herbaceous – 50%* *Browse - 20%*	
Seeps	*Included in Uplands*	*Herbaceous – 50%* *Browse - 20%*	
Vegetation Restoration *Mahogany*	*NONE*	*227 acres (YJ-15) burn*	*227 acres (YJ-15 burn)*
Stream Restoration	*NONE*	*NONE*	*NONE*
Range Improvements *Fence Construction*	***Main Unit*** *NONE* ***Nelson Unit*** *NONE*	***Main Unit*** *1.5 miles (YJ-11, YJ-12)* ***Nelson Unit*** *0.5 miles (YJ-19)*	***Main Unit*** *NONE* ***Nelson Unit*** *NONE*
Water Developments	***Main Unit*** *NONE* ***Nelson Unit*** *NONE*	***Main Unit*** *3(YJ-13, YJ-14, YJ-17)* ***Nelson Unit*** *1(YJ-18)*	***Main Unit*** *NONE* ***Nelson Unit*** *NONE*
Herding Facilitation	***Main Unit*** *NONE*	***Main Unit*** *Install wire gate (YJ-20)*	***Main Unit*** *NONE*

Management Practice	Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Permittee Actions *Fence Maintenance*	***Main Unit*** *12.75 miles* ***Nelson Unit*** *1.5 miles*	***Main Unit*** *14.25 miles* ***Nelson Unit*** *2.0 miles*	***Main Unit*** *12.75 miles* ***Nelson Unit*** *1.5 miles*
Water Source Maintenance	***Main Unit*** *4* ***Nelson Unit*** *1*	***Main Unit*** *3* ***Nelson Unit*** *2*	***Main Unit*** *4* ***Nelson Unit*** *1*
Monitoring: *Annual (implementation);*	*High Priority, key areas on this allotment will be monitored using full measurement or ocular estimates*	*A minimum number of key areas will be monitored by full measurement.*	*NONE*
Long-term (effectiveness)	*3 benchmarks identified in this Allotment (Regional Contract)*	*Minimum of 3 benchmarks in this Allotment (Regional Contract)*	*3 benchmarks identified in this Allotment (Regional Contract)*

SUMMARY TABLES OF MANAGEMENT PRACTICES BY ALTERNATIVE

CURRENT MANAGEMENT ALTERNATIVE

SUMMARY OF VEGETATION RESTORATION

Vegetation	Allotment	ID#	Description	Acres
Sagebrush	Davis Creek	DC-11	Prescribed burn	310
Sagebrush	Mount Bidwell	MB-9	Prescribed burn	81
Sagebrush	Mount Bidwell	MB-10	Prescribed burn	246
Sagebrush	Selic	BR-8	Prescribed burn	152
ALL	**ALL**	**ALL**	**ALL Vegetation Restoration Projects**	**789**

SUMMARY OF STREAM RESTORATION

Watershed	Allotment	ID#	Description	Acres
Davis Cr.	Davis Creek	DC-7	Culvert removal & streambank recontouring	1
ALL	**ALL**	**ALL**	**ALL Stream Restoration Projects**	**1**

SUMMARY OF RANGE IMPROVEMENTS
Fence Construction, Fence Reconstruction, Fence Removal, Water Developments

Type	Allotment	ID#	Description	Units
Fence Construction	Davis Creek & Lassen Creek	LC-8b	Allotment boundary fence (miles)	0.5
Fence Construction	**ALL**	**ALL**	**Fence construction (miles)**	**0.5**
Fence Reconstruction	Bidwell & Mount Bidwell	B-2	Allotment boundary fence (miles),	1.5
Fence Reconstruction	Mount Bidwell	MB-11	Allotment boundary fence (miles) with Fremont National Forest	4.0
Fence Reconstruction	**ALL**	**ALL**	**Fence Reconstruction (miles)**	**5.5**
Water Developments	Mount Bidwell	MB-1	Stockpond (each)	1
Water Developments	**ALL**	**ALL**	**Water Developments (each)**	**1**
Fence Removal	Mount Bidwell	MB-14	Fence and 1 cattleguard (miles)	1.5
Fence Removal	**ALL**	**ALL**	**Fence & Cattleguard Removal(mi.)**	**1.5**

STEWARDSHIP ALTERNATIVE

SUMMARY OF VEGETATION RESTORATION

Vegetation	Allotment	ID#	Description	Acres
Aspen	Bald Mountain	BM-7	Remove conifers, burn, fence & cattleguard	40
Aspen	Bald Mountain	BMR-2	Remove conifers and burn	80
Aspen	Bear Camp	BR-9	Remove conifers and burn	200
Aspen	Blue Lake Cattle	BR-9	Remove conifers and burn	190
Aspen	Cedar Canyon	CC-7	Remove conifers, burn and fence	50
Aspen	Cedar Canyon	CC-8	Install electric fence to protect regeneration	100
Aspen	Cedar Canyon	CC-9	Remove conifers, burn and fence	40
Aspen	Davis Creek	DC-10	Remove conifers and burn	250
Aspen	Fandango	F-1a	Remove conifers and burn	80
Aspen	Granger Canyon	GC-5	Remove conifers, burn and till soil	40
Aspen	Granger Canyon	GC-6	Remove conifers, burn and fence	60
Aspen	Henderson Meadow	HM-7	Remove conifers, burn and fence	30
Aspen	Mount Bidwell	MB-5	Remove conifers and burn	100
Aspen	**ALL**	**ALL**	**ALL**	**1,260**
Bitterbrush	Davis Creek	DC-12	Remove juniper boles, burn light intensity	219
Bitterbrush	Wilderness Sheep	BR-15	Remove juniper, cut mahogany and burn	50
Bitterbrush	**ALL**	**ALL**	**ALL**	**269**
Juniper	Cedar Canyon	CC-10	Remove juniper, burn hand piles	100
Juniper	Outlet, Parsnip and West Valley	OU-5	Employ appropriate suppression strategies when natural ignitions occur	8,866
Juniper	West Valley	WV-2	Fell juniper, burn	1,638
Juniper	**ALL**	**ALL**	**ALL**	**10,604**
Meadow	Myrtle Creek	MC-2	Remove conifers, burn	30
Meadow	**ALL**	**ALL**	**ALL**	**30**
Mahogany	Yankee Jim	YJ-15	Prescribed burn	227
Mahogany	**ALL**	**ALL**	**ALL**	**227**
Sagebrush	Bald Mountain	BM-8a	Prescribed burn	289
Sagebrush	Davis Creek	DC-11	Prescribed burn	310
Sagebrush	Fandango	F-1b	Prescribed burn	440
Sagebrush	Fandango	F-6	Prescribed burn	3,656
Sagebrush	Mount Bidwell	MB-7	Employ appropriate suppression strategies when natural ignitions occur	1,892
Sagebrush	Mount Bidwell	MB-9	Prescribed burn	81
Sagebrush	Mount Bidwell	MB-10	Prescribed burn	246
Sagebrush	North Parker	NP-4	Prescribed burn	108
Sagebrush	Selic	BR-8	Prescribed burn	152
Sagebrush	Thoms Creek	TC-2	Prescribed burn	85
Sagebrush	**ALL**	**ALL**	**ALL**	**6,863**
ALL	**ALL**	**ALL**	**ALL Vegetation Restoration Projects**	**19,253**

SUMMARY OF STREAM RESTORATION

Watershed	Allotment	ID#	Description	Acres
Davis Cr.	Davis Creek	DC-4	Streambank recontouring	2
Davis Cr.	Davis Creek	DC-7	Culvert removal & streambank recontouring	1
ALL	**ALL**	**ALL**	**ALL Stream Restoration Projects**	**3**

SUMMARY OF FENCE CONSTRUCTION

Allotment	ID#	Purpose	Description	Miles
Bald Mountain	BM-3	Create deferred pasture	Wire and post w/1 cattleguard	3.00
Bald Mountain	BM-4	Exclude livestock	Natural materials preferred, possibly from project BM-7	2.00
Bald Mountain	BM-6	Exclude livestock	Natural materials preferred, possibly from project BM-7	1.25
Bald Mountain	BM-14a	Create deferred pasture	Wire and post	0.25
Bald Mountain	BMR-3	Create deferred pasture	Wire and post	1.00
Bald Mountain & Cedar Canyon	CC-11	Allotment boundary	1 cattleguard with minor fence relocation	0.10
Blue Lake Cattle	BLC-9	Exclude livestock	Wire and post	0.90
Blue Lake Cattle	BLC-12	Exclude livestock	Wire and post	0.90
Blue Lake Cattle	BLC-17	Exclude livestock from Blue Lake Campground	Natural materials w/1 cattleguard	1.00
Buck Creek & Fandango	BC-1	Allotment boundary	Wire and post	1.50
Cedar Canyon	CC-8	Exclude livestock	Electric fence	2.00
Davis Creek	DC-1	Exclude livestock	Wire and post	1.00
Davis Creek & Bald Mountain	DC-14/ BM-13	Allotment boundary (east side)	Wire and post	1.00
Davis Creek & Bald Mountain	DC-15/ BM-14	Allotment boundary (west side)	Wire and post w/1 cattleguard	1.00
Granger Canyon	GC-7	Create deferred pasture	Wire and post w/1 cattleguard	0.50
Granger Canyon & Yankee Jim	YJ-19	Allotment boundary	Wire and post	0.50
Lassen Creek	LC-3	Allotment boundary	Wire and post w/1 cattleguard	1.00
Lassen Creek & Davis Creek	LC-8b	Allotment boundary fence	Wire and post	0.50
North Parker Creek	NP-9	Allotment boundary	1 cattleguard	0.00
Outlet	OU-4	Create deferred pasture	1 cattleguard	0.00
Thoms Creek & Cedar Canyon	CC-5	Allotment boundary	Natural materials mandatory w/1 cattleguard	0.50
West Valley	WV-7	Create deferred pasture	Wire and post	2.50
Yankee Jim	YJ-11	Exclude livestock	Wire and post	0.75
Yankee Jim	YJ-12	Exclude livestock	Wire and post	1.00
	ALL		**Fence Construction (miles) & Cattleguards (each)**	**25.65 & 9**

SUMMARY OF FENCE RECONSTRUCTION

Allotment	ID#	Purpose	Description	Miles
Bear Camp & Bureau of Land Management &	BR-13	Allotment boundary	Wire and post	1.75
Bidwell & Mount Bidwell	B-2	Allotment boundary	Wire and post	1.5
Cedar Canyon	CC-3	Deferred pasture boundary	Wire and post	2.00
Coyote, Blue Lake Cattle & Bear Camp	BLC-14	Allotment boundary	Wire and post	7.00
Fandango & Lassen	F/LC-1	Allotment boundary	Natural materials for elk visibility and low maintenance	1.00
Lassen Creek & Davis Creek	LC-8a	Allotment boundary	Wire and post	0.50
Mount Bidwell	MB-6a	Deferred pasture boundary	Wire and post	0.75
Mount Bidwell & Fremont N.F.	MB-11	Allotment boundary	Wire and post	4.00
North Creek & Bureau of Land Management	NC-1	Allotment boundary	Cleanout 4 cattleguards, install temporary wire gate for 1 year	0.00
Outlet & West Valley	WV-5	Allotment boundary	Repair base of cattleguard	0.00
West Valley & Parsnip	WV-6	Allotment boundary	Wire and post	1.00
ALL	**ALL**		**Fence Reconstruction(miles) & Cattleguard Repair(each)**	**20.50 & 5**

SUMMARY OF FENCE REMOVAL

Allotment	ID#	Purpose	Description	Miles
Mount Bidwell	MB-14	Economics	Fence and Cattleguard(miles)	1.5
North Parker Creek	NP-9	Economics	Fence and 2 Cattleguards (miles)	2.0
ALL	**ALL**		**Fence & Cattleguard Removal (miles)**	**3.5**

SUMMARY OF WATER DEVELOPMENTS

Allotment	ID#	Purpose	Description	Units (ea.)
Bald Mountain	BM-8b	Uniform use distribution	Spring development	4
Bald Mountain	BM-8c	Uniform use distribution	Construct earthen stockpond	1
Bald mountain	BM-8d	Uniform use distribution	Spring development	1
Blue Lake Cattle	BLC-9	Uniform use distribution	Spring development	1
Blue Lake Cattle	BLC-10	Uniform use distribution	Improve existing spring development	1
Blue Lake Cattle	BLC-11	Uniform use distribution	Install water tank	1
Blue Lake Cattle	BLC-12	Riparian protection	Collection device and drinking facility	1
Blue Lake Cattle	BLC-18	Meadow irrigation	Maintain existing ditches	4
Davis Creek	DC-1	Riparian protection	Construct earthen stockpond	1
Fandango	F-1	Uniform use distribution	Spring development	1
Fandango	F-2	Increase flow of spring	Remove all junipers around spring up to a distance of 200 feet. Repair springbox & trough	1
Fandango	F-3	Uniform use distribution	Spring development	1
Fandango	F-4	Uniform use distribution	Spring development	1
Fandango	F-5	Uniform use distribution	Cleanout existing stockponds	2
Lassen Creek	LC-5	Uniform use distribution	Spring development	1
Lassen Creek	LC-7	Uniform use distribution	Spring development	1
Mount Bidwell	MB-1	Riparian protection	Construct earthen stockpond	1
North Parker Creek	NP-3a	Uniform use distribution	Repair spring development	1
North Parker Creek	NP-3b	Uniform use distribution	Spring developments	3
West Valley	WV-3	Uniform use distribution	Clean out stock pond with dozer or backhoe	2
West Valley	WV-4	Uniform use distribution	Construct earthen stockponds	2
Yankee Jim	YJ-13	Increase flow of spring	Remove all conifers less than 22" in diameter at 4.5' above the ground, and within 200 feet of the spring. Use for merchantable products if market exists.	1
Yankee Jim	YJ-14	Uniform use distribution	Clean out stock pond with dozer or backhoe	1
Yankee Jim	YJ-17	Uniform use distribution	Construct earthen stockpond	1
Yankee Jim	YJ-18	Uniform use distribution	Clean out stock pond with dozer or backhoe	1
ALL	**ALL**	**ALL**	**ALL**	**36**

SUMMARY OF HERDING FACILITATION

Allotment	ID#	Purpose	Description	Units
Bald Mountain	BM-10	Facilitate control	Fence to make 1 holding field	.75mi
Bald Mountain	BMR-1	Facilitate control	Fence to make 4 holding fields	3.0mi
Bear Camp	BR-12	Facilitate movement	Burn logging slash	188ac
Bear Camp	BR-14	Facilitate control	Fence to make 1 holding field	1.5mi
Blue Lake Cattle	BLC-16	Facilitate control	Repair existing corral fence	.10mi
Blue Lake Cattle	BLC-19	Facilitate movement	Construct livestock bridges over streams	3bridges
Fandango	F-2a	Facilitate movement	Remove brush on herding trail	1.0mi
Henderson Meadow	HM-8	Facilitate control	Drift fence	.25mi
Mount Bidwell	MB-6	Facilitate movement	Remove brush on herding trail	0.6mi
North Creek	NC-2	Facilitate movement	Thin dense timber stand	20 ac
North Parker Ck	NP-5	Facilitate movement	Remove juniper trees	20 ac
North Parker Ck	NP-6	Facilitate movement	Remove brush on herding trail	2.0mi
Yankee Jim	YJ-20	Facilitate movement	Install wire gate on fence	1 gate

NO GRAZING ALTERNATIVE

SUMMARY OF VEGETATION RESTORATION

Vegetation	Allotment	ID#	Description	Acres
Aspen	Bald Mountain	BM-7	Remove conifers, burn, fence & cattleguard	40
Aspen	Bald Mountain	BMR-2	Remove conifers and burn	80
Aspen	Bear Camp	BR-9	Remove conifers and burn	200
Aspen	Blue Lake Cattle	BR-9	Remove conifers and burn	190
Aspen	Cedar Canyon	CC-7	Remove conifers, burn and fence	50
Aspen	Cedar Canyon	CC-8	Install electric fence to protect regeneration	100
Aspen	Cedar Canyon	CC-9	Remove conifers, burn and fence	40
Aspen	Davis Creek	DC-10	Remove conifers and burn	250
Aspen	Fandango	F-1a	Remove conifers and burn	80
Aspen	Granger Canyon	GC-5	Remove conifers, burn and till soil	40
Aspen	Granger Canyon	GC-6	Remove conifers, burn and fence	60
Aspen	Henderson Meadow	HM-7	Remove conifers, burn and fence	30
Aspen	Mount Bidwell	MB-5	Remove conifers and burn	100
Aspen	**ALL**	**ALL**	**ALL**	**1,260**
Bitterbrush	Davis Creek	DC-12	Remove juniper boles, burn light intensity	219
Bitterbrush	Wilderness Sheep	BR-15	Hand treat, burn hand piles	50
Bitterbrush	**ALL**	**ALL**	**ALL**	**269**
Juniper	Cedar Canyon	CC-10	Remove juniper, burn hand piles	100
Juniper	Outlet, West Valley and Parsnip	OU-5	Employ appropriate suppression strategies when natural ignitions occur	8,866
Juniper	West Valley	WV-2	Fell juniper, burn	1,638
Juniper	**ALL**	**ALL**	**ALL**	**10,604**

Vegetation	Allotment	ID#	Description	Acres
Meadow	Myrtle Creek	MC-2	Remove conifers, burn	30
Meadow	**ALL**	**ALL**	**ALL**	**30**
Mahogany	Yankee Jim	YJ-15	Prescribed burn	227
Mahogany	**ALL**	**ALL**	**ALL**	**227**
Sagebrush	Bald Mountain	BM-8a	Prescribed burn	289
Sagebrush	Davis Creek	DC-11	Prescribed burn	310
Sagebrush	Fandango	F-1b	Prescribed burn	440
Sagebrush	Fandango	F-6	Prescribed burn	3,656
Sagebrush	Mount Bidwell	MB-7	Employ appropriate suppression strategies when natural ignitions occur	1,892
Sagebrush	Mount Bidwell	MB-9	Prescribed burn	81
Sagebrush	Mount Bidwell	MB-10	Prescribed burn	246
Sagebrush	North Parker	NP-4	Prescribed burn	108
Sagebrush	Selic	BR-8	Prescribed burn	152
Sagebrush	Thoms Creek	TC-2	Prescribed burn	85
Sagebrush	**ALL**	**ALL**	**ALL**	**6,863**
ALL	**ALL**	**ALL**	**ALL Vegetation Restoration Projects**	**19,253**

SUMMARY OF STREAM RESTORATION

Watershed	Allotment	ID#	Description	Acres
Davis Cr.	Davis Creek	DC-4	Streambank recontouring	2
Davis Cr.	Davis Creek	DC-7	Culvert removal & streambank recontouring	1
ALL	**ALL**	**ALL**	**ALL Stream Restoration Projects**	**3**

SUMMARY OF FENCE REMOVAL

Allotment	ID#	Purpose	Description	Miles
Mount Bidwell	MB-14	Economics	Fence and Cattleguard(miles)	1.5
North Parker Creek	NP-9	Economics	Fence and 2 Cattleguards (miles)	2.0
ALL	**ALL**		**Fence & Cattleguard Removal (miles)**	**3.5**

WILDERNESS SHEEP ADAPTIVE MANAGEMENT ALTERNATIVE

SUMMARY OF VEGETATION RESTORATION

Vegetation	Allotment	ID#	Description	Acres
Bitterbrush	Wilderness Sheep	BR-15	Remove juniper, cut mahogany and burn	50
ALL	**ALL**	**ALL**	**ALL Vegetation Restoration Projects**	**50**

BALD MOUNTAIN PERMITTEE ALTERNATIVE

SUMMARY OF VEGETATION RESTORATION

Vegetation	Allotment	ID#	Description	Acres
Aspen	Bald Mountain	BM-7	Remove conifers, burn, fence & cattleguard	40
Aspen	Bald Mountain	BMR-2	Remove conifers and burn	80
Aspen	**Bald Mountain**	**ALL**	**ALL**	**120**
Sagebrush	Bald Mountain	BM-8a	Prescribed burn	289
Sagebrush	**Bald Mountain**	**ALL**	**ALL**	**289**
ALL	**Bald Mountain**	**ALL**	**ALL Vegetation Restoration Projects**	**409**

SUMMARY OF FENCE CONSTRUCTION

Allotment	ID#	Purpose	Description	Miles
Bald Mountain	BM-3	Create deferred pasture	Wire and post w/1 cattleguard	3.00
Bald Mountain	BM-4	Exclude livestock	Natural materials preferred, possibly from project BM-7	2.00
Bald Mountain	BM-6	Exclude livestock	Natural materials preferred, possibly from project BM-7	1.25
Bald Mountain	BM-10	Holding field	Wire and post	0.75
Bald Mountain	BM-14a	Create deferred pasture	Wire and post	0.25
Bald Mountain	BMR-1	Holding fields (four)	Natural materials	3.00
Bald Mountain	BMR-3	Create deferred pasture	Wire and post	1.00
Bald Mountain & Cedar Canyon	CC-11	Allotment boundary	1 Cattleguard with minor fence relocation	0.10
Davis Creek & Bald Mountain	DC-14/ BM-13	Allotment boundary (east side)	Wire and post	1.00
Davis Creek & Bald Mountain	DC-15/ BM-14	Allotment boundary (west side)	Wire and post w/1 cattleguard	1.00
	ALL		**Fence Construction (miles) & Cattleguards (each)**	**13.35 & 3**

SUMMARY OF WATER DEVELOPMENTS

Allotment	ID#	Purpose	Description	Units (ea.)
Bald Mountain	BM-8b	Uniform use distribution	Spring development	4
Bald Mountain	BM-8c	Uniform use distribution	Construct earthen stockpond	1
Bald Mountain	BM-8d	Uniform use distribution	Spring development	1
Bald Mountain	**ALL**	**ALL**	**ALL**	**6**

CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

This chapter contains a discussion of the effects of the activities proposed in the Alternatives described in **CHAPTER 3**. Effects are considered either: (1) direct effects, which are those that occur as a direct result of a change in activity; (2) indirect effects, which are those that occur later in time, or that occur indirectly to other segments of the environment; or (3) cumulative effects, which are a combination of effects resulting from undertaking a combination of activities over time. This chapter provides a comparison of how each of the alternatives responds to the following environmental indicators, which were identified during the analysis process:

- WATER QUALITY
  - ***Maximum Instream Temperature***
  - ***Diurnal Instream Temperature Fluctuation***
  - ***Stream Channel Form***
  - ***Cumulative Watershed Effects***
- RIPARIAN (STREAMS AND SPRINGS) VEGETATIVE COMMUNITIES
  - ***Ecological Condition***
- SEEP COMMUNITIES
  - ***Ecological Condition***
- UPLAND VEGETATIVE COMMUNITIES
  - ***Ecological Condition***
- ASPEN COMMUNITIES
  - ***Ecological Condition***
- THREATENED, ENDANGERED AND SENSITIVE SPECIES (FAUNAL AND FLORAL)
  - ***Population Viability***
- WILDERNESS VALUES
  - ***Preservation of Wilderness Character***
- SOCIO-ECONOMIC EFFECTS
  - ***Civil Rights***
  - ***Environmental Justice***
  - ***Historical and Archaeological***
  - ***Modoc County Economy***
  - ***Culture, Lifestyle, and Quality of Life in Local Communities***
  - ***Inclusion of Local Community Knowledge***
- RANGE PROGRAM EFFECTS
  - ***Balance Between Landscape Capability and Community Economy***

Each of the analysis indicators will be described in more detail below, along with a discussion of the effects of the activities proposed within each Alternative on the indicator.

In order to analyze cumulative effects for the Warner Mountain Rangeland Project, the Forest Service interdisciplinary team addressed the following four questions:

> If the **Current Management Alternative** were selected for each of the 28 allotments, what would be the cumulative effect on the relevant indicators across the Project area?
>
> If the **Stewardship Alternative** were selected for each of the 28 allotments, what would be the cumulative effect on the relevant indicators across the Project area?
>
> If the **No Grazing Alternative** were selected for each of the 28 allotments, what would be the cumulative effect on the relevant indicators across the Project area?
>
> If the **Adaptive Management Alternative** were selected for the Wilderness Sheep Allotments, and the **Stewardship Alternative** were selected for all other allotments, what would be the cumulative effect on the relevant indicators across the Project area?

The Forest Service interdisciplinary team also addressed the following allotment specific question:

> If the **Permittee Alternative** were selected for the Bald Mountain Allotment, what would be the effect on the relevant indicators as compared to the other alternatives for that allotment?

TABLE 4-1, located at the end of **CHAPTER 4**, displays the results of the Forest Service analysis addressing all the aforementioned questions. **TABLE 4-1** displays *relative ratings* of effects for each proposed activity, on each analysis indicator. These ratings indicate *the direction and rate of change* caused by each activity towards reaching the Desired Condition for the indicator. A rating of *6-10*, indicates change *towards* the Desired Condition, with 10 representing the fastest rate of change. A rating of *4-0*, indicates change *away* from the Desired Condition, with 0 indicating the fastest change away from the Desired Condition. A rating of *5*, indicates that there would be *no apparent change* towards or away from the Desired Condition. A rating of "n/a" is displayed when there is no cause and effect relationship between an activity and an indicator. Of note is that because utilization standards and monitoring are applied systematically on every allotment for the **Current Management**, **Stewardship** and **No Grazing Alternatives**, the ratings displayed on **TABLE 4-1** for Project area effects, would also reflect effects for these indicators on each individual allotment.

On **TABLE 4-1**, and in the **INDICATORS AND EFFECTS** section which follows, the ratings for the **"Wilderness Sheep Alternative"** *assume that the* **Wilderness Sheep Adaptive Management Alternative** *is selected for the three Wilderness Sheep Allotments, and the* ***Stewardship Alternative*** *is selected for the other 25 allotments.* However, on **TABLE 4-1**, the ratings for **Bald Mountain Permittee Alternative** represent *only the effects of that alternative* on the analysis indicators. The ratings for the **Bald Mountain Permitee Alternative** were so different than the ratings for other allotments for certain indicators, that the effects for that alternative could not be analyzed cumulatively with the effects on other allotments across the Project area.

INDICATORS AND EFFECTS

WATER QUALITY

Indicators:

Maximum Instream Temperature, Diurnal Instream Temperature Fluctuation, Stream Channel Form and ***Cumulative Watershed Effects*** are indicators of WATER QUALITY. The first three indicators are indirect effects occurring as a result of direct effects on the riparian vegetative communities. The fourth indicator includes both direct and indirect effects.

Maximum Instream Temperature is the highest instream temperature in any 24 hour period. The Desired Condition for maximum instream temperature is less than 70 degrees Fahrenheit (F). Maximum instream temperature is one indicator of the suitability of a stream as habitat for aquatic organisms. This Desired Condition is based on habitat requirements for trout species known to inhabit streams on the Warner Mountains.

Several factors can influence maximum instream temperature. For most streams, temperature at the stream source is probably not the limiting factor for most streams, as most stream sources (springs) come out of the ground at temperatures far below the Desired Condition. Where warmer than average springs are identified, determination of water quality effects attributable to livestock grazing management practices will consider the temperature at the stream source.

Ambient air temperature can cause some marginal instream temperature rise through equilibration in the spring and summer months when the instream temperature is usually less than the ambient air temperature. Equilibration is when heat flows from a mass of a higher temperature to a mass of a lower temperature. When the instream temperature is colder than the ambient air temperature the stream temperature will rise. If the instream temperature is warmer than the ambient air, as often occurs in the fall and winter, then the stream will experience a reduction in temperature. Livestock grazing management can have very little effect on ambient air temperature.

Insolation (solar radiation) is a major contributor to instream warming that can be reduced through livestock grazing management practices. Reduction of insolation occurs through two processes, shading of streams and reduction of stream surface exposure. Shading is the interception and absorption of incoming solar radiation, and can be provided by riparian vegetation or terrain features. Steep bluffs, cliffs or steep slopes on the south side of a stream can sometimes provide shading of stream surfaces, dependant on sun position, depth of stream gorge and direction of stream flow. The most common provider of shade is riparian vegetation. Timbered slopes along a stream can provide shade. However, for much of the rangelands on the Warner Mountains, there is an absence of shade provided by topographic features or timber stands, and the lone remaining provider of shade on the stream is riparian vegetation such as grasses, herbs, forbs and woody shrubs. The Satisfactory Ecological Condition for riparian vegetation is described in ***Appendix C – ECOLOGICAL CONDITION DESCRIPTIONS, Streams and Springs (Riparian) Condition Matrix,*** pp. C-3 and C-4. Because the foliage of the riparian vegetation intercepts and absorbs solar radiation, the height and density of riparian vegetation directly affects the amount of solar radiation received by the stream.

Stream Channel Form is commonly described in terms of width-to-depth ratio. For streams in the Warner Mountains, the Desired Condition for width-to-depth ratio is generally equal to or less than

12:1. Although varying by stream type, width-to-depth ratio directly affects the proportion of the stream volume that is near the water surface, where most of the heating by equilibration or insolation occurs. As water molecules near the water surface heat up in the spring and summer, the adjacent water molecules will be heated through equilibration. Changes in stream channel form cause changes in the amount of the stream volume that is susceptible to solar radiation. As the width-to-depth ratio decreases, the amount of stream volume at or near the surface decreases proportionally, and stream warming via these sources decreases proportionally.

Experience on the Modoc National Forest has shown that width-to-depth ratio can be reduced through use of proper livestock grazing practices. The literature (Clay and Webster 1987, Clay 1999, Winward 2000, Platts 1984, 1987, 1989, 1992) plus experience on the Modoc National Forest, including Lassen Creek with in the WMRP area, clearly indicate that with herbaceous use at 30-40%, retention of 4-6 inches of stubble (40-45% utilization), and less than 20% streambank alternation, stream channels respond by trapping sediment, building streambanks, aggrading from the bottom, and becoming narrower and deeper. This process builds vegetated point bars, and forms a deeper, narrower channel which has a lower width-to-depth ratio and greater pool to riffle ratios. Sediment trapping efficiency is directly related to residual stubble height, up to a maximum of about six inches, and is directly related to the amount of herbaceous streambank vegetation present, thus the requirement for limitation of streambank alteration. Additionally, limitations on streambank alteration retain existing root masses which stabilize streambanks, reducing bank erosion and stream siltation. Finally, sediment trapping efficiency is directly related to the species of herbaceous vegetation present. Species with large, deep root masses are able to resist being dislodged during peak flows, and species with long, broad leaves in dense clusters are most efficient at sediment trapping. Perennial grasses and sedges have both of these characteristics, and are the most efficient at trapping silt. See ***Appendix C*** **– ECOLOGICAL CONDITION DESCRIPTIONS, Streams and Springs (Riparian) Condition Matrix,** Satisfactory Ecologic Condition, for listings of the species that are desired.

Increased shading by riparian vegetation and reduction in width-to-depth ratio (w/d) work synergistically to reduce stream temperature. As the w/d ratio of the stream decreases, the area of the stream surface decreases. When this occurs, the same height and density of riparian vegetation will reduce solar radiation on a larger percentage of the stream surface. Likewise, if the w/d ratio does not change, an increase in height and density of riparian vegetation decreases the area of the stream surface exposed to solar radiation. If w/d ratio decreases and height and density of riparian vegetation increase, then the area of the stream surface exposed to ambient air temperature equilibration or solar insolation is greatly decreased.

Diurnal Instream Temperature Fluctuation is the difference between the daily maximum instream temperature and the daily minimum instream temperature in a 24 hour period. The Desired Condition for diurnal instream temperature fluctuation is between 5 and 15 degrees Fahrenheit (F). Diurnal instream temperature fluctuation is another indicator of the suitability of a stream as habitat for aquatic organisms. This temperature range is based on habitat requirements for trout species known to inhabit streams on the Warner Mountains.

Cumulative Watershed Effects are the combined effects of land use activities, transmitted through the fluvial system to the site of a beneficial use. The Desired Condition is that cumulative effects do not exceed the capacity of the fluvial system to deliver water to all points of beneficial uses in a condition suitable for the intended beneficial use. Beneficial uses include but are not limited to domestic; municipal; agricultural supply; industrial supply; power generation; recreation; aesthetics; navigation; and protection of fish, wildlife, and other aquatic resources or preserves. The activities

and combined effects can occur in different times or places, but the effects accumulate at a point of beneficial use.

For Warner Mountain streams that are tributary to the Pit River, beneficial uses are identified as far downstream as the San Francisco Delta and Bay. For other Warner Mountain streams, beneficial uses continue down to Goose Lake ot to the applicable alkali lake. The most common beneficial uses that could be affected by activities in the Warner Mountain Rangeland Project are: irrigation; recreation and instream habitat needs for aquatic organisms. For instream habitat needs for aquatic organisms, the most important water quality attributes are temperature (both maximum and diurnal fluctuation) and clarity (silt load). The most important water quality attributes for recreation and irrigation is clarity. Temperature effects have been discussed previously. High silt loads can make water unappealing for recreation users and can reduce transmission capacity in irrigation ditches and reduce storage capacity in reservoirs, resulting in costly maintenance and repair. High silt loads can reduce suitability of habitat for aquatic organisms, by covering gravel beds used for fish spawning and by covering suitable habitat for macro-invertebrates. Excessive silt can physically affect fish and aquatic organisms by imparing gill actions. Activities occuring outside the stream channel can affect silt loads if soil is disturbed and transported to the stream system. Movement of the riparian vegetation towards the Desired Condition will reduce temperature and silt load as described previously.

Cumulative watershed effects can be direct or indirect effects depending upon the activity. Direct cumulative watershed effects result from the ground disturbing effects of vegetative treatments while indirect cumulative effects commonly result from changes in riparian vegetative conditions, caused by treatment or by implementation of utilization standards (see discussion of effects on Riparian community later).

Effects:

The **No Grazing Alternative** provides the greatest overall benefit to water quality as a result of elimination of livestock grazing. Elimination of livestock grazing allows for the swiftest possible rate of change towards the Desired Condition for water quality. In particular, riparian vegetation will respond most quickly, and channel morphology, maximum temperature and diurnal fluctuation will change beneficially at the greatest rate. Mechanical treatments and/or burning in the **No Grazing Alternative** willcause some soil disturbance that may result in some minor, short-term increases in cumulative watershed effects that will be minimized by implementation of Best Management Practices. These short-term effects will be outweighed in the long-term by the beneficial watershed effects of increasing the quality and abundance of the riparian communities. For the planning period of this project, the net cumulative watershed effects are more beneficial to water quality for the **No Grazing Alternative** than for the **Current Management Alternative** or the **Stewardship Alternative**.

The **Stewardship Alternative** provides greater overall benefit to water quality as a result of reductions in allowable utilization and increased monitoring in the riparian communities than does the **Current Management Alternative**. These utilization reductions and increased monitoring allow for a swifter rate of change towards the Desired Condition for water quality than does the **Current Management Alternative**. Channel morphology, maximum temperature and diurnal fluctuation will change beneficially at a greater rate in the **Stewardship Alternative** than in the **Current Management Alternative**. Higher levels of mechanical treatments and/or burning in the **Stewardship Alternative** than in the **Current Management**, will cause some soil disturbance that may result in some minor, short-term increases in cumulative watershed effects, but in the long-term

these effects will be outweighed by the beneficial watershed effects of increasing the quality and abundance of the riparian vegetation. Higher levels of rangeland improvements in the **Stewardship Alternative** will also cause swifter movement towards the Desired Condition than will the lower level of physical improvements in the **Current Management Alternative**. For the planning period of this project, the net cumulative watershed effects for the **Stewardship Alternative** are more beneficial to water quality than for the **Current Management Alternative**.

The **Wilderness Sheep Alternative** provides water quality benefits less than the **No Grazing Alternative**, and greater than the **Current Management Alternative** and the **Stewardship Alternative**. The small increase in beneficial water quality effects over the Stewardship Alternative results from lower allowable utilization levels on uplands and aspen stands in Unsatisfactory Condition in the **Wilderness Sheep Alternative**. Some of these areas are in close proximity to riparian areas, which would benefit from reduced grazing on the upland or in aspen stands.

Monitoring is the key to ensuring implementation of utilization standards, which results in the effects described previously. The **Wilderness Sheep Alternative** proposes the highest level of both annual monitoring and effectiveness monitoring, with the **Stewardship Alternative** containing the next highest level of both types of monitoring. The **Current Management Alternative** contains the next lowest level of monitoring of both types, and the **No Grazing Alternative** has no annual implementation monitoring necessary, and has only moderate long-term monitoring of vegetative progression towards the Desired Condition.

The **Bald Mountain Permittee Alternative** would provide the least water quality benefits of all the Alternatives. This Alternative proposes no annual utilization standards except for a stubble-height requirement on streams with a Rosgen rating of C or D, on the Allotment. The near total lack of annual utilization standards and the accompanying monitoring, eliminates an effective tool for ensuring that annual use is not contributing negative water quality effects, and for ensuring that annual movement of water quality towards the Desired Condition is achieved. The proposal for long-term monitoring only, could allow adverse effects to occur unnoticed for several years, and when the negative effects were discovered, the condition could be so severe as to require dramatic efforts to reverse the negative effects. This Alternative proposes actions that conflict with direction found in the Modoc LRMP (Management Direction for Range Within Riparian Areas, p. 4-138). In particular, Guideline #6 on p. 4-139 would not be met. This guideline states we must "maintain streambanks in stable condition as specifically defined in allotment management plans."

This Alternative proposes actions that violate Best management Practice 8.2 (and therefore are not in compliance with the Clean Water Act). BMP 8.2 requires that "the [grazing] permit contains requirements to maintain or improve water quality and is administered to ensure such conditions are met." Stubble height measurements, even together with temperature and turbidity monitoring, would not be sufficient to ensure that water quality is protected.

RIPARIAN VEGETATIVE COMMUNITIES

Indicators:

Ecological Condition for riparian vegetative communities is described in ***Appendix C* – ECOLOGICAL CONDITION DESCRIPTIONS, Streams and Springs (Riparian) Condition Matrix,** pp. C-3 and C-4. The Desired Condition for riparian vegetative communities is Satisfactory Ecological Condition/Proper Functioning Condition, with the full expression of all described

vegetative components. Change in the Ecological Condition of riparian vegetative communities is a direct effect of proposed changes in grazing systems, utilization standards, physical improvements, permittee actions and monitoring. Direct changes in the riparian vegetative communities will cause indirect effects on water quality as previously discussed. Direct changes in the riparian vegetative communities towards the Desired Condition will result in a more diverse and stable plant community. Riparian communities at the Desired Condition provide a wide diversity of habitat components for many species, including forage, hiding and thermal cover, fawning cover for deer and nesting habitat for birds.

Effects:

The **No Grazing Alternative** provides for the greatest rate of change towards the Desired Condition for the riparian vegetative communities, as a result of the lack of vegetative utilization by livestock. More restrictive utilization standards, particularly the riparian standards and increased monitoring proposed in the **Stewardship Alternative** will move the riparian communities more swiftly towards the Desired Condition than under the **Current Management Alternative.** As a result of the utilization standards in the **Current Management Alternative,** most riparian areas are in Satisfactory Ecological Condition/Proper Functioning Condition, but very few are at Desired Condition. The most common reasons they are not at Desired Condition is the lack of three or more species of riparian woody plants and in many cases there is a lack of perennial grasses and sedges. Higher levels of physical improvements in the **Stewardship Alternative** will also cause swifter movement towards the Desired Condition than will the lower level of physical improvements in the **Current Management Alternative.**

The **Wilderness Sheep Alternative** would move the riparian communities towards the Desired Condition at a lesser rate than the **No Grazing Alternative,** but at a greater rate than the **Stewardship Alternative.** The **Wilderness Sheep Alternative** proposes less vegetative utilization in some uplands and aspen stands, some of which are in close proximity to riparian areas which would benefit from reduced grazing.

Monitoring is the key to ensuring implementation of utilization standards, which results in the effects described here. The **Wilderness Sheep Alternative** proposes the highest level of both annual monitoring and effectiveness monitoring, with the **Stewardship Alternative** containing the next highest level of both types of monitoring. The **Current Management Alternative** contains the next lowest level of monitoring of both types, and the **No Grazing Alternative** has no annual implementation monitoring necessary, and has only moderate monitoring of vegetative progression towards the Desired Condition.

The **Bald Mountain Permitee Alternative** would provide the least riparian benefits of all the Alternatives. This Alternative proposes no annual utilization standards except for a stubble-height requirement on streams on the Rosgen C and D streams on the Allotment. The near total lack of annual utilization standards and the accompanying monitoring, eliminates an effective tool for ensuring that annual use is not contributing negative riparian effects, and for ensuring that annual movement of the vegetative condition towards the Desired Condition is achieved. The proposal for long-term monitoring only, could allow adverse effects to occur unnoticed for several years, and when the negative effects were discovered, the condition could be so severe as to require dramatic efforts to reverse the negative effects.

SEEP VEGETATIVE COMMUNITIES

Indicators:

Ecological Condition for seep communities is described in ***Appendix C*** – **ECOLOGICAL CONDITION DESCRIPTIONS, Seep Condition Matrix,** pp. C-7 and C-8. The Desired Condition for seep vegetative communities is Satisfactory Ecological Condition/Properly Functioning Condition, with the full expression of all described vegetative components. Change in the Ecological Condition of seep vegetative communities will directly result from proposed changes in grazing systems, utilization standards, physical improvements, permittee actions and monitoring. By definition, because seeps have no overland hydrologic continuity with stream systems, they do not affect water quality in the fluvial system as previously described. However, seeps are connected to the rest of the fluvial systemvia subsurface flow and groundwater recharge. A lowered water table will reduce seeps. Conversely, healthy seeps will contribute subsurface flow to the rest of the system. In addition, changes in the seep communities towards the Desired Condition will result in a more diverse and stable plant community. Seep communities at the Desired Condition provide a wide diversity of habitat components for many species, including forage, hiding and thermal cover for large mammals, watering locations, fawning cover for deer, nesting habitat for birds and suitable habitat for aquatic organisms.

Effects:

The **No Grazing Alternative** provides for the greatest rate of change towards the Desired Condition for the seep communities, as a result of the lack of vegetative utilization by livestock. More restrictive utilization standards and increased monitoring proposed in the **Stewardship Alternative** for seeps in Unsatisfactory Ecological Condition will move seeps more swiftly towards the Desired Condition than under the **Current Management Alternative.** As a result of the utilization standards in the **Current Management Alternative**, only one seep area in Unsatisfactory Ecological Condition has currently been identified. Many seeps are currently uninventoried and their condition is unknown. They are assumed to be in Satisfactory Ecological Condition until determined to be otherwise. Higher levels of physical improvements in the **Stewardship Alternative** will also cause swifter movement towards the Desired Condition than will the lower level of physical improvements in the **Current Management Alternative.**

The **Wilderness Sheep Alternative** would move the seep communities towards the Desired Condition at a lesser rate than the **No Grazing Alternative**, but at a greater rate than the **Stewardship Alternative.** The **Wilderness Sheep Alternative** proposes less vegetative utilization in some uplands and aspen stands, some of which are in close proximity to seep areas which would benefit from reduced grazing.

Monitoring is the key to ensuring implementation of utilization standards, which results in the effects described here. The **Wilderness Sheep Alternative** proposes the highest level of both annual monitoring and effectiveness monitoring, with Stewardship contain the next highest level of both types of monitoring. The **Current Management Alternative** contains the next lowest level of monitoring of both types, and the **No Grazing Alternative** has no annual implementation monitoring necessary, and has only moderate monitoring of vegetative progression towards the Desired Condition.

The **Bald Mountain Permittee Alternative** would provide the least seep community benefits of all the Alternatives. This Alternative proposes no annual utilization standards for seeps. The lack of

annual utilization standards and the accompanying monitoring, eliminates an effective tool for ensuring that annual use is not contributing negative effects on seep communities, and for ensuring that annual movement of the seep vegetative condition towards the Desired Condition is achieved. The proposal for long-term monitoring only, could allow adverse effects to occur unnoticed for several years, and when the negative effects were discovered, the condition could be so severe as to require dramatic efforts to reverse the negative effects.

UPLAND VEGETATIVE COMMUNITIES

Indicators:

Ecological Condition for upland vegetative communities is described in ***Appendix C* – ECOLOGICAL CONDITION DESCRIPTIONS, Upland Condition Matrix,** pp. C-1 and C-2. The Desired Condition for upland vegetative communities is Satisfactory Ecological Condition/Proper Functioning Condition, with the full expression of all described vegetative components. Change in the Ecological Condition of upland vegetative communities is a direct effect of proposed changes in grazing systems, utilization standards, vegetative treatments, physical improvements, permittee actions and monitoring. Changes in the upland vegetative communities towards the Desired Condition will result in a wide diversity of plant species with a balanced distribution of age classes, resulting in a more diverse and stable plant community. Upland vegetative communities at the Desired Condition provide a wide diversity of habitat components for many species, including forage, hiding and thermal cover for large mammals, fawning cover for deer and nesting habitat for birds. In the mountain big sage community, the prescription for vegetation restoration treatment through prescribed fire is to reduce the canopy cover of mountain big sage from 40% to 20%, in a mosaic pattern over at least 50% of the treated area.

While reductions in wildfire severity potential is not an indicator for the WMRP, the existing decadent condition of many upland areas creates moderate to high wildfire severity potential. Proposed vegetation treatments will swiftly move upland vegetative communities towards the Desired Condition for vegetation restoration, and at the same time will reduce fuel loadings and wildfire severity potential. Heavy fuel loadings in over-mature shrub species will change to lighter lighter fuel loadings, due to the restoration of mixed age and species compositions. This fuel loading reduction will cause strategic advantage in fighting wildfire, and provide areas of lighter fuels from which to launch fire suppression efforts.

Effects:

Under the **Current Management Alternative,** most of the uplands are in Satisfactory Ecological Condition, but are not at Desired Condition because they lack a full expression of the vegetative components described in the **Upland Condition Matrix.** The **No Grazing Alternative** provides for the greatest rate of change towards the Desired Condition for the upland vegetative communities as a result of the lack of vegetative utilization by livestock, and the vegetation restoration treatments proposed. However, the **No Grazing Alternative** would have the greatest rate of fine fuel accumulation in the upland vegetative communities, and thus the highest probability of the greatest acreage consumed by naturally-ignited fire. The **Stewardship Alternative** would move the same number of acres of upland vegetation towards the Desired Conditions at an appropriate rate through improved livestock management and the proposed vegetation restoration treatments. Utilization of the vegetation would cause movement towards the Desired Condition to be slower than under the **No Grazing Alternative**, however, the **Stewardship Alternative** would also result in less fine fuel accumulation than the **No Grazing Alternative**. Higher levels of vegetative treatments in the

Stewardship Alternative will cause swifter movement towards the Desired Condition than will the lower level of vegetative treatments in the **Current Management Alternative**. The **Current Manangement Alternative** would allow the least level of fuels accumulation, and thus the probability of the lowest acreage consumed by naturally-ignited fire.

The **Wilderness Sheep Alternative** would move the upland vegetative communities towards the Desired Condition at a lesser rate than the **No Grazing Alternative**, but at a greater rate than the **Stewardship Alternative** or the **Current Management Alternative**. The **Wilderness Sheep Alternative** proposes less vegetative utilization on additional acres of uplands identified as Unsatisfactory Ecological Condition. Fuels accumulation would be greater than all Alternatives other than the **No Grazing Alternative**. This would result in a higher probability of more acres being consumed through naturally-ignited fire in the South Warner Wilderness.

Monitoring is the key to ensuring implementation of utilization standards, which results in the effects described previously. The **Wilderness Sheep Alternative** proposes the highest level of both annual monitoring and effectiveness monitoring, with **Stewardship Alternative** containing the next highest level of both types of monitoring. The **Current Management Alternative** contains the next lowest level of monitoring of both types, and the **No Grazing Alternative** has no annual implementation monitoring, and has only moderate monitoring of vegetative progression towards the Desired Condition.

The **Bald Mountain Permittee Alternative** would provide the least upland vegetative community benefits of all the Alternatives. This Alternative proposes no annual utilization standards for uplands. The lack of annual utilization standards and the accompanying monitoring, eliminates an effective tool for ensuring that annual use is not contributing negative effects on upland communities, and for ensuring that annual movement of the upland vegetative condition towards the Desired Condition is achieved. The proposal for long-term monitoring only, could allow activities causing negative effects to occur unnoticed for several years, and when the negative effects were discovered, the condition would be so severe as to require dramatic efforts to reverse the negative effects. This Alternative proposes the same level of vegetative treatments for the Bald Mountain Allotment as does the **Stewardship Alternative**. The **Bald Mountain Permittee Alternative** would allow the lowest level of fuels accumulation.

ASPEN VEGETATIVE COMMUNITIES

Indicators:

Ecological Condition for aspen vegetative communities is described in ***Appendix C*** – **ECOLOGICAL CONDITION DESCRIPTIONS, Aspen Condition Matrix,** pp. C-5 and C-6. The Desired Condition for aspen vegetative communities is Satisfactory Ecological Condition/Proper Functioning Condition, with the full expression of all described vegetative components. Change in the Ecological Condition of aspen vegetative communities is a direct effect of proposed changes in grazing systems, utilization standards, vegetative treatments, physical improvements, permittee actions and monitoring. Changes in the aspen vegetative communities towards the Desired Condition will result in a more diverse and stable plant community. Aspen vegetative communities at the Desired Condition provide a wide diversity of habitat components for many species, including forage, hiding and thermal cover for large mammals, fawning cover for deer, nesting habitat for birds and suitable habitat for aquatic organisms.

Effects:

The **No Grazing Alternative** provides for the greatest rate of change towards the Desired Condition for the aspen vegetative communities, as a result of the lack of vegetative utilization by livestock and vegetation treatements proposed. The **Stewardship Alternative** would move the same number of acres of aspen vegetation very swiftly towards the Desired Conditions through vegetative treatments, but in untreated areas, utilization of the vegetation would cause movement towards the Desired Condition to be slower than the **No Grazing Alternative.** Increased monitoring proposed in the **Stewardship Alternative** will ensure implementation of utilization standards that will move aspen vegetative communities more swiftly towards the Desired Condition than under the **Current Management Alternative**. As a result of the utilization standards in the **Current Management Alternative**, most of the aspen communities are in Satisfactory Ecological Condition, but are not at Desired Condition because they lack a full expression of the vegetative components described in the **Aspen Condition Matrix.** Higher levels of vegetative treatments in the **Stewardship Alternative** will also cause swifter movement towards the Desired Condition than will the lower level of vegetative treatments in the **Current Management Alternative.**

The **Wilderness Sheep Alternative** would move the aspen vegetative communities towards the Desired Condition at a lesser rate than the **No Grazing Alternative,** but at a greater rate than the **Stewardship Alternative** or the **Current Management**. The **Wilderness Sheep Alternative** proposes less vegetative utilization on additional acres of aspen stands identified as Unsatisfactory Ecological Condition.

Monitoring is the key to ensuring implementation of utilization standards, which results in the effects described previously. The **Wilderness Sheep Alternative** proposes the highest level of both annual monitoring and effectiveness monitoring, with the **Stewardship Alternative** containing the next highest level of both types of monitoring. The **Current Management Alternative** contains the next lowest level of monitoring of both types, and the **No Grazing Alternative** has no annual implementation monitoring, and has only moderate monitoring of vegetative progression towards the Desired Condition.

The **Bald Mountain Permittee Alternative** would provide the least aspen vegetative community benefits of all the Alternatives. This Alternative proposes no annual utilization standards or monitoring for aspen stands. The lack of annual utilization standards or monitoring, eliminates an effective tool for ensuring that annual use is not contributing negative effects on aspen communities, and for ensuring that annual movement of the aspen vegetative condition towards the Desired Condition is achieved. The proposal for long-term monitoring only, could allow activities causing negative effects to occur unnoticed for several years, and when the negative effects were discovered, the condition would be so severe as to require dramatic efforts to reverse the negative effects.

THREATENED, ENDANGERED OR SENSITIVE SPECIES (FAUNAL OR FLORAL)

Indicators:

Population Viability for Threatened, Endangered or Sensitive species is the likelihood that a population will persist for some chosen time into the future (often a hundred years). A population viability analysis focuses on the factors most limiting to a species' survival. These limiting factors, such as habitat loss, are called "deterministic" because they were the the factors that caused the populations of species to be isolated or rare in the first place. In the short-term, deterministic factors should be addressed before other less limiting factors.

For the Warner sucker, the Warner Valley redband trout and the Goose Lake redband trout, the deterministic factor is habitat quality. Habitat quality can be affected by livestock grazing through increased instream temperature and increased siltation, related to streambank disturbance and presence and quality of riparian vegetation.

Warner sucker *(Catostomus warnerensis)*

Both the Bidwell and Mount Bidwell Allotments contain the headwaters for Twelvemile Creek, which is tributary habitat to downstream habitat of the Federally-listed (threatened) Warner sucker.

Consultation was conducted with the US Fish & Wildlife Service during preparation of the 1997 *Mt. Bidwell and Bidwell Allotment Management Plans Environmental Assessment*. The Fish and Wildlife Service concurred with the BA that was associated with the selected alternative for that Environmental Assessment, that the selected alternative would not jeopardize the species. The WMRP **Current** Management and **Stewardship Alternatives** include all of the actions previously included in the 1997 Mt. Bidwell and Bidwell decision regarding the Warner sucker. The only additional action in the Warner sucker watershed included in the **Stewardship Alternative** is the Wildland Fire Use Area (MB-7). With respect to Warner sucker habitat, the **No Grazing Alternative** includes the same actions as the **Stewardship Alternative**, except that it does not include livestock grazing, nor the fence reconstruction, water development or stock trail brushing.

Warner Valley redband trout *(Oncorhynchus mykiss pop 4)*

Both the Bidwell and Mount Bidwell Allotments contain the headwaters for Twelvemile Creek, which is habitat of the Warner Valley redband trout, a Regional Forester's Sensitive species. The Biological Evaluation prepared by the Forest Service for the 1997 *Mt. Bidwell and Bidwell Allotment Management Plans Environmental Assessment* indicated that the selected alternative would not lead to a trend towards listing of the Warner Valley redband trout. The WMRP **Stewardship Alternative** includes all of the actions previously included in the 1997 Mt. Bidwell and Bidwell decision regarding the Warner Valley redband trout. The only additional action in the Valley redband trout watershed included in the **Stewardship Alternative** is the Wildland Fire Use Area (MB-7). With respect to Warner Valley redband trout habitat, the **No Grazing Alternative** includes the same actions as the **Stewardship Alternative**, except that it does not include livestock grazing, nor the fence reconstruction, water development or stock trail brushing.

Goose Lake redband trout *(Oncorhynchus mykiss pop 6)*

All streams on allotments on the west aspect of the Warner Mountains are tributary to either Goose Lake or the Pit River. Both water bodies are habitat for the Goose Lake redband trout. In 1991 the Goose Lake Fishes Working Group (GLFWG) formed including: the US Fish and Wildlife Service; Forest Service; National Resource Conservation Service; Bureau of Land Management; Regional Water Quality Control Board; California Department of Fish and Game; Oregon Department of Fish and Wildlife; University of California Cooperative Extension; University of California, Davis; Oregon State University Extension Service; Oregon State Department of Lands; Modoc County, California, Board of Supervisors; Lake County, Oregon, Board of Supervisors; Modoc County Farm Bureau; Trout Unlimited. In 1993, the GLFWG began a landowner education program focusing on riparian improvement of private lands, including bank stabilization, fencing, aquatic surveys and assessments. In 1994 the GLFWG received a "Wildlife Conservation Award" from the Director of the California Department of Fish and Game. In 1996, the GLFWG completed a Goose Lake Fishes

Conservation Strategy. In September 1997, the Fish and Wildlife Service was petitioned to list the Great Basin redband trout as a threatened or endangered species. This group includes the Goose Lake redband trout. In March 2000, the Fish and Wildlife Service "12 month finding" was that listing of the Goose Lake redband trout was not warranted, and the Service specifically referenced the work of the GLFWG. All management direction contained in the Conservation Strategy is included in the WMRP **Stewardship Alternative**, the **No Grazing Alternative** and the **Wilderness Sheep Alternative**.

Willow flycatcher *(Empidonax trailii)*

Willow flycatcher is a Regional Forester's Sensitive Species. The typical habitat described for willow flycatcher is willow thickets in large (15 acres or greater) montane meadows. The Warner Mountain Ranger District contains very little habitat that meets this description. Actual experience on the Modoc National Forest, has shown that willow flycatchers will nest in riparian stringers of willow and willow patches in meadows less than 15 acres in size. The Warner Mountain Ranger District contains numerous acres of meadows less than 15 acres in size with some willow component, and numerous miles of riparian corridors with minor components of willows. The Warner Mountain Ranger District contains six nest sites of the 107 known nest sites in the state of California, of which 67 are located on National Forest lands in the Sierra Nevada Framework (Craig, Schlorff, Valentine and Pelles, 1982, Harris and Sanders and Flett, 1986, Sanders and Flett, 1989, serena, 1982, Stafford and Valentine, 1985, Stephanie, et.al., 2000, Valentine, 1987). Past experience on the Modoc National Forest has shown that where capable, small meadows and riparian corridors can produce robust willow communities in 7 to 10 years, through proper combinations of browse utilization standards for woody riparian species and timing and duration of grazing can produce dramatic increases in willow communities in meadows and riparian stringers.

One prominent school of thought to protect willow flycatchers where populations are limited, is to limit livestock access to potential nesting habitat during critical nesting and fledging periods. This strategy is based on evidence that livestock movement in proximity to willow flycatcher nests results in significant nesting failure due to nest displacement during nesting and rearing of young in the early spring and summer season. This strategy is usually implemented by restricting livestock access to nesting habitat by changing from early-season grazing to late-season grazing in the vicinity of that nesting habitat. In the late-season, cattle utilize willows as a forage source much more than in the early-season. This late-season grazing in the vicinity of nesting habitat can lead to deterioration of the nesting habit unless the willow community is large enough to overcome annual livestock use in late-season. Further, the utilization of deciduous shrubs must be totally time/area controlled. Nesting success is irrelevant if next years nesting habitat is removed at the end of the nesting year.

Under the WMRP **Stewardship Alternative**, the Forest would not restrict grazing to the late-season in the vicinity of nest sites. Proposals to protect nest sites from cattle displacement are driven by a critical shortage of nest sites. Based on 10 years of success on the Modoc National Forest, the WMRP chooses a strategy of dramatically increasing the quantity and quality of nesting habitat. The willow communities in the small meadows and riparian corridors do not contain sufficient willow population to increase while being grazed in the late-season. Implementation of grazing systems and standards to reduce willow utilization by livestock, and/or early-season grazing in the vicinity of nesting habitat will strikingly increase the size of the willow communities within 7-10 years. While some sort-term willow flycatcher production may be lost to nest disturbance by livestock, the long-term result will be a significant increase in potential willow flycatcher nest sites through the development of greatly increased availability of healthy willow sites.

Evidence indicates that livestock movement in the proximity of willow flycatcher habitat has the potential to dislodge nests during the critical nesting period in the early summer season. Grazing only in the late season in willow flycatcher habitat is an activity that was not proposed in any Alternatives. This approach is focused only on retaining existing, suitable nesting habitat, and not in creating additional suitable habitat. In fact, this approach can result in loss of suitable habitat through livestock damage to willow patches in the fall. Cattle utilize willows as a browse source much more in the late season than in the early season, resulting in movement of the willow stands away from the Desired Condition. Annual nesting success is irrelevant if potential suitable nesting habitat is reduced for future years.

Sensitive Plants

Seven species of Sensitive Plants have historical records of occurrence within the Warner Mountain Rangeland Project. Following is a summary of these species and their habitats:

Species Name / Common Name	Habitat Description	Potential for negative effects
Cypripedium montanum mountain lady-slipper	Scattered across western North America. One historical sighting on the Warner Mountains, in the Davis Creek Allotment. Moist conifer sites with greater than 60% tree canopy cover.	Grazing/ trampling
Eriogonum prociduum prostrate buckwheat	Known only in south-central Lake County, Oregon, northwest Nevada and Modoc County, California, mostly throughout the central Warner Mountains. Dry, rocky volcanic slopes and hills, mostly in yellow pine or pinon-juniper woodlands. Known occurrences in Granger Canyon, Yankee Jim, Wilderness Sheep, Bald Mountain and Myrtle Creek Allotments.	None
Eriogonum umbellatum var. glaberrimum green buckwheat	Known only in southeastern Oregon and Modoc County, California. Three known sites in the North Warner Mountains. Sagebrush scrub is potential habitat. Known occurrences in Mt. Bidwell, Myrtle Creek and Bald Mountain Allotments.	Prescribed fire
Galium glabrescens ssp. modocense Modoc bedstraw	Known only to Warner Mountains, Modoc County, California. Gravelly slopes and under the edges of rocks in sagebrush. 17 known sites, in Emerson, Wilderness Sheep, Granger Canyon, Cedar Canyon and Bald Mountain Allotments.	None
Galium serpenticum ssp. warnerense Warner Mountain bedstraw	Know only in Modoc County and southern Oregon. Steep gravelly slopes. 11 known sites in the Myrtle Creek Allotment.	None
Iliamna bakeri Baker's globe mallow	Known in Jackson and Klamath Counties in Oregon, and Siskyou, Shasta and Modoc Counties in California. Areas with volcanic	None (fire enhances)

Species Name / **Common Name**	**Habitat Description**	**Potential for negative effects**
	loams or lava beds, especially after fire. Only know occurrence in Warner Mountains, as single plants along roadsides. These single plants are not contributing to species viability, and there is no potential for negative effects. Therefore, this species will not be a concern in the Warner Mountains.	
Mimulus evanescens ephemeral monkeyflower	Known only in southwest Idaho, eastern Oregon and Modoc and Lassen Counties, California. Sagebrush/juniper areas, scattered among rock fragments and alongside small boulders, in moist, heavy gravel that has been inundated early in the spring. Also, rocky streambanks, drying watercourses and rocky edges of reservoirs.	Trampling

There have been many surveys conducted within the WMRP area within the last few years. In 1996 and 1997, the Nature Conservancy in partnership with the Modoc National Forest conducted surveys on the portions of the WMRP area north of State Highway 299E (Cedar Pass). Due to the large area to be surveyed, the most likely locations of suitable habitat were surveyed. Since this survey, *Mimulus evansescens* has been added to the Regional forester's Sensitive Plant Species list. In addition, some extensive surveys of the South Warner Wilderness and the North Warner Mountains on the Myrtle Creek Allotment. These surveys were concentrated around lakes, trails and the crest of the mountain.

Three of these species, *Cypripedium montanum, Eriogonum umbellatum var. glaberrimum, and Mimulus evanescens* have the potential to be affected by the Warner Mountain Rangeland Project. *Eriogonum umbellatum var. glaberrimum* has the potential to be negatively affected by prescribed fire in sagebrush scrub vegetation. All proposed burning projects in sagebrush scrub will be surveyed prior to implementation. If plants are found, appropriate mitigation will be applied to the burning project, including cancellation if necessary. *Cypripedium montanum* and *Mimulus evanescens* have the potential to be negatively affected by livestock grazing and/or livestock trampling. Geographic Information System technology is being used to identify areas with the highest potential to contain habitat for these species. Surveys will be conducted in the plant growing season of the years 2000 and 2001 in all these areas of high potential. Sites with lesser potential to contain habitat for these two species will be sample surveyed. If plant populations are discovered, appropriate mitigation will be applied.

Effects:

Warner sucker

As indicated above, the **Current Management Alternative** includes allotment management actions for the Bidwell and Mount Bidwell Allotments which have a Biological Assessment determination and US Fish and Wildlife Service concurrence that the actions would not jeopardize the species. The **Stewardship Alternative** includes the same actions in and around the habitat of the Warner Sucker as does the the **Current Management Alternative,** and therefore the concurrence with the

no effect opinion is also valid for the **Stewardship Alternative**. The **No Grazing Alternative** would have no effect on Warner sucker population viability, and may be slightly more beneficial to the Warner sucker population than either **Current Management** or the **Stewardship Alternative**, due to less streambank disturbance by livestock nor any livestock utilization of riparian vegetation. There is no Warner sucker habitat within the **Wilderness Sheep** and **Bald Mountain Permittee Alternatives**.

Warner Valley redband trout

There will be no effect on the viability of the Warner Valley redband trout populations, as a result of activities included in the **Stewardship Alternative**. The **Stewardship Alternative** includes utilization standards that reduce utilization of riparian vegetation, range improvements to restrict access to riparian areas, range improvements to attact livestock away from riparian areas and controlled use periods. These activities will move the riparian vegetative communities towards the Desired Condition, and improve water quality in the process, as was previously discussed. The **No Grazing Alternative** would result in no utilization of riparian vegetation by livestock and no streambank disturbance by livestock, and may be slightly more beneficial to red band trout than the **Stewardship Alternative**. The **Wilderness Sheep Alternative** would have effects similar to but slightly better than the **Stewardship Alternative**, but not as beneficial as the effects of **No Grazing**. The **Wilderness Sheep Alternative** proposes lower levels of utilization in some aspen stands which are in Unsatisfactory Ecological Condition. Riparian areas near to or intermingled with aspen stands will receive some benefit from this reduced level of utilization. The **Current Management Alternative** and the **Bald Mountain Alternative** both have the potential to affect the redband trout populations viability, through higher levels of utilization of riparian vegetation by livestock and streambank disturbance by livestock. Higher levels of utilization in these Alternatives will not move the riparian vegetation towards the Desired Condition at an appropriate rate, and therefore water quality will not be improved.

Goose Lake redband trout

There will be no effect on the viability of the Goose Lake redband trout populations, as a result of activities included in the **Stewardship Alternative,** which are part of the Goose Lake Fishes Conservation Strategy. The **Stewardship Alternative** includes utilization standards that reduce utilization of riparian vegetation, range improvements to restrict access to riparian areas, range improvements to attact livestock away from riparian areas and controlled use periods. These activities will move the riparian vegetative communities towards the Desired Condition, and improve water quality in the process, as was previously discussed. The **No Grazing Alternative** would result in no utilization of riparian vegetation by livestock and no streambank disturbance by livestock, and may be slightly more beneficial to red band trout than the **Stewardship Alternative**. The **Wilderness Sheep Alternative** would have effects similar to but slightly better than the **Stewardship Alternative**, but not as beneficial as the effects of **No Grazing**. The **Wilderness Sheep Alternative** proposes lower levels of utilization in some aspen stands which are in Unsatisfactory Ecological Condition. Riparian areas near to or intermingled with aspen stands will receive some benefit from this reduced level of utilization. The **Current Management Alternative** and the **Bald Mountain Alternative** both have the potential to affect the redband trout populations viability, through higher levels of utilization of riparian vegetation by livestock and streambank disturbance by livestock. Higher levels of utilization in these Alternatives will not move the riparian vegetation towards the Desired Condition at an appropriate rate, and therefore water quality will not be improved.

Willow flycatcher

The long-term effect of the **Stewardship Alternative** will be to significantly improve habitat for the willow flycatcher, since lower use levels will allow development and expression of willow habitat. The **Stewardship Alternative** include more restrictive utilization standards, range improvements to restrict access to riparian areas, range improvements to attact livestock away from riparian areas and controlled use periods. These activities will move the riparian vegetative communities towards the Desired Condition, improve water quality in the process, as was previously discussed and provide better willow cover. The **No Grazing Alternative** would result in no utilization of riparian vegetation and no streambank disturbance. The **Wilderness Sheep Alternative** would have effects similar to but slightly better than the **Stewardship Alternative,** but not as beneficial as the effects of **No Grazing**. The **Current Management Alternative** and the **Bald Mountain Alternative** both have the potential to affect the willow flycatcher population viability, through higher levels of utilization of riparian vegetation by livestock and streambank disturbance by livestock. These Alternatives do not allow willow stands to express fully their potential. All Alternatives that propose livestock grazing in proximity to suitable nesting habitat have the potential to cause impacts to individual nests, but the **Stewardship, No Grazing** and **Wilderness Sheep** have the potential to cause long-term population increase through increases in willow habitat.

Sensitive Plants

None of the Alternatives will have an effect on the viability of populations of *Eriogonum umbellatum var. glaberrimum.* The **Wilderness Sheep Alternative** does not propose any burning, and any burning in sagebrush stands in all other Alternatives, will be surveyed prior to implementation. If *Eriogonum umbellatum var. glaberrimum* populations are found, appropriate mitigation will be applied, up to and including cancellation, if necessary, of the burning project in which they are found..

None of the Alternatives will affect population viability of *Cypripedium montanum* and *Mimulus evanescens.* The **No-Grazing Alternative** has no potential to affect population viability because of the lack of livestock grazing. For all other Alternatives, population viability effects will be avoided through survey and mitigation. Areas with the potential to contain these species are being located and stratified from highest probability to lowest, through the use of Geographic Information System technology. These areas will be surveyed in the years 2000 and 2001, in order of their probability of containing any of these species. If populations are found, the Forest Service, permittees and other interested parties will work collaboratively to develop mitigation to protect the population.

WILDERNESS VALUES

Indicators:

Preservation of Wilderness Character allows natural processes to operate to the maximum extent possible as prescribed by the Wilderness Act and Forest Service direction. A growing concern for the preservation and protection of lands in their natural condition culminated in the passage of the *Wilderness Act* of 1964. As part of the *Wilderness Act*, special provisions allowed for certain natural resource uses, such as grazing, to continue where established prior to the effective date of the act, "subject to reasonable regulations." Given this mandate, the Forest Service provides opportunities for people to enjoy and experience the wilderness resource while managing the special exceptions, such as grazing, provided for in the law.

A primary ecological impact of livestock grazing is on the vegetative community. Past livestock grazing within the South Warner Wilderness has created some unnatural vegetative conditions through utilization of grasses, herbs, forbs and brush and trampling of soil. These areas do not exhibit the species diversity, age structure, vegetative layers or density associated with natural conditions, and there may be a high proportion of soil without vegetation. When these vegetative conditions are compared to the ECOLOGICAL CONDITION DESCRIPTIONS in ***Appendix C***, they are also found to be in Unsatisfactory Ecological Condition, or Satisfactory Ecological Condition but not at Desired Condition.

The Wilderness Act describes an area which "generally appears to have been affected primarily by the forces of nature." The fact that grazing was allowed as a special exception to the *Wilderness Act*, implies that "natural" appearance will be altered somewhat where grazing is permitted. However, livestock utilization standards that retain taller stubble height along the water's edge, promote increased willow and herbaceous diversity, and limit streambank alteration by livestock, in order to promote ecological Desired Conditions, also create a more natural appearing landscape.

The most dominant example of a natural process operating in ecosystems within the Wilderness would be plant community development through plant succession. Plant succession is the progression of plant community development following a given level of ecosystem disturbance. Ecosystem disturbances change the affected vegetation to an earlier successional stage, and the type and intensity of disturbance determine the starting point of the plant succession after disturbance. Disturbances can be natural or man-caused. Some common natural disturbances which affect plant succession in the South Warner Wilderness are fire, wind, frost, drought, snow and ice damage, and insect damage. The most common man-caused disturbance in the South Warner Wilderness is livestock grazing, in particular excessive vegetation consumption by domestic livestock. Most of the livestock management approaches to improving ecological conditions outside of the South Warner Wilderness, are appropriate to implement to move ecological conditions within the Wilderness towards Desired Condition.

To restore fire to the ecosystem in the South Warner Wilderness the Modoc National Forest has approved *The South Warner Wilderness Fire Management Plan.* The Plan authorizes the Modoc Forest to allow naturally ignited fires to burn within prescribed parameters. It is estimated that the fine fuels remaining after livestock graze to utilization standards identified in the ***Appendix C- ECOLOGICAL CONDITION DESCRIPTIONS,*** will be adequate to carry prescribed naturally ignited fire in the South Warner Wilderness.

Effects:

The **No Grazing Alternative** allows the greatest rate of plant progression towards the Desired Condition, which results in natural appearing conditions at the highest possible rate. This is achieved as a result of the lack of livestock utilization of vegetation. The lack of livestock utilization of vegetation also produces conditions most likely to allow naturally-ignited fire to play its natural role in the ecosystem.

The **Wilderness Sheep Alternative** allows a lesser rate of plant progression in all vegetative communities than the **No Grazing Alternative**, but does allow a greater rate of plant progression towards the Desired Condition in the Upland and Aspen areas than does the **Stewardship Alternative** and the **Current Management Alternative.** This is achieved as a result of a shorter use period and the more restrictive livestock utilization standards than the **Stewardship Alternative**

and the **Current Management Alternative** in areas of Unsatisfactory Ecological Condition in the Uplands and Aspen. These more restrictive utilization standards and shorter use period would allow reestablishment of natural appearing conditions at a rate exceeded only by the **No Grazing Alternative** for Uplands and Aspen. The lower livestock utilization levels and shorter use period of Uplands and Aspen in the **Wilderness Sheep Alternative** also produce conditions highly likely to allow naturally-ignited fire to play a greater natural role than in the the **Stewardship** and **Current Management Alternatives**.

The **Wilderness Sheep Alternative** allows a greater rate of plant progression towards the Desired Condition in the Riparian and Seep areas than does the **Current Management Alternative**. This is achieved as a result of the more restrictive livestock utilization standards and shorter length of season than the **Current Management Alternative** in Riparian and Seep areas. These more restrictive utilization standards and shorter season would allow reestablishment of natural appearing conditions at a rate exceeded only by the **No Grazing Alternative** for Uplands and Aspen. The utilization standards for Riparian and Seep areas are the same in the **Wilderness Sheep Alternative** and the **Stewardship Alternative**. The Riparian and Seep areas may benefit slightly from the lower Upland and Aspen utilization standards in the **Wilderness Sheep Alternative**.

The **Current Management Alternative** allows the least progression towards the Desired Condition of all four vegetative communities (Upland, Riparian, Aspen, Seeps). The higher utilization levels would not allow reestablishment of natural appearing conditions at an appropriate rate. The higher livestock utilization levels in the **Current Management Alternative** also result in conditions in many locations that are highly unlikely to allow naturally-ignited fire to play its full natural role in the ecosystem.

Monitoring is the key to ensuring that the effects described previously do occur. The **Wilderness Sheep Alternative** proposes the highest level of both annual monitoring and effectiveness monitoring, with **Stewardship** contain the next highest level of both types of monitoring. The **Current Management Alternative** contains the next lowest level of monitoring of both types, and the **No Grazing Alternative** has no annual implementation monitoring, and has only moderate monitoring of vegetative progression towards the Desired Condition.

The **Bald Mountain Permittee Alternative** is not within, adjacent or near to the South Warner Wilderness. Therefore, no effects on preservation of wilderness character occur for that Alternative.

SOCIO-ECONOMIC

Indicators:

Civil Rights are the legal rights of United States citizens to guaranteed equal protection under the law. The guarantee of equal protection is provided by the Civil Rights Act of 1964 and other related acts. The objective of assessing compliance with the Civil Rights Act is to ensure that no person is denied participation in or benefits of Forest Service programs because of race, sex, color, national origin, age, handicap, creed, or marital status. The ***Civil Rights*** indicator estimates alterations in peoples' civil rights status that might occur as a result of, or in conjunction with, implementation of alternatives.

Environmental Justice is achieved with the assurance that policies, programs, and/or procedures do not systematically and disproportionately expose communities to environmental degradation and

health threats based on race, color, national origin, or economic status (geographic location). This assurance includes not only the distribution of pollution in poor and minority communities, but also the enforcement of laws and regulations. Environmental Justice refers to those cultural norms and values, rules, regulations, behaviors, policies, and decisions to support sustainable communities where people can interact with confidence that their environment is safe. Assurance of Environmental Justice is required by Executive Order 12898, February 11, 1994.

Historical and Archaeological effects are those that affect historic and prehistoric archaeological sites and information. Effects might include distortion of spatial and chronological relationships through disturbance and loss of informational components through removal or destruction. The National Historic Preservation Act of 1966, as amended, provides for protection of historic and prehistoric archaeological sites and information.

Modoc County Economy effects are the effects on the County's economy as a result of the permitted livestock grazing on the Warner Mountain Ranger District. As livestock permittees pay wages and buys goods and services in the County, their dollars are re-circulated throughout the County economy. The ability and propensity of the permittees to spend money in Modoc County is directly related to revenue generated through their livestock operations, including their public land grazing. The *direct* economic effects on the County economy are the dollars the livestock permittees spend in Modoc County and the employment associated with their operations. The *indirect* and *induced* effects on the County economy are the revenues generated as permittee expenditures re-circulate through various sectors of the County economy.

Before describing in detail the analysis process for determining the effects on the Modoc County economy, it is important to briefly discuss the infeasibility of assigning dollar benefit values to rangeland restoration efforts. While it is easy to determine dollar costs of range improvements for livestock management, or vegetation and watershed restoration projects, it is difficult to convert some of the resulting benefits to dollar values. The benefit value of improving the quality of wildlife habitat on public land has no easily measured dollar value. Fish and wildlife populations may benefit from restoring uplands to Desired Condition, but it is impossible to predict what part of that benefit will accrue directly from the vegetation and watershed restoration efforts, in addition to modeling a dollar value for those benefits. Various dollar values have been estimated for wildlife and fish visitor days, both for hunting and sightseeing, but these estimates, again, are difficult to correlate to individual vegetation and watershed restoration efforts. The Warner Mountain Rangeland Project plays a major role in water quality and quantity. It lies in the headwaters of the Pit River, which provides 20% of the Sacramento River flow. There are millions of people who benefit from the water quality and quantity in the Sacramento River, but the direct proportion of their dollar benefits accruing to the WMRP cannot be modeled cost-effectively.

Part of the Forest Service mandate is to maintain or enhance rural community economic stability. The economic effects on the Modoc County economy can be determined for each Alternative based on the anticipated livestock HMs that are projected under that Alternative. For the grazing Alternatives, these anticipated HMs are largely dependent on the investment in range improvements.

The Modoc National Forest Economist used the computer model *IMPLAN* (IMpact analysis for PLANning) to estimate the effects on the ***Modoc County Economy*** of different WMRP Alternatives, based on anticipated livestock HMs under each Alternative. The *IMPLAN* model was developed by the Forest Service to assess economic effects on economies of different scales. The model has since been adopted and supported by the Minnesota Implan Group Incorporated, and is widely accepted in the field of economic impact analysis. The *IMPLAN* model produces estimates of changes in all

economic sectors of a specific economy resulting from anticipated changes in one or more sectors of that economy.

The specific economy for this analysis is Modoc County. The one economic sector that would be primarily changed by the Alternatives being considered in the WMRP is *range-fed cattle*. Inasmuch as sheep HMs comprise only about 6% of the total livestock HMs on the Warner Mountain Ranger District, for the *IMPLAN* analysis, the sheep HMs were converted and lumped with cattle HMs.

The *IMPLAN* model is based upon actual, publicly available economic data for Modoc County for 1996. This is the most recent data available. Dollar values have been converted to year 2000 dollars to account for inflation.

As changes in the final demand for the *range-fed cattle* sector are made, indirect and induced changes are projected in many other sectors. Most noteworthy, is the fact that ranch-related industries in Modoc County account for 19% of the total value of production in the Modoc economy. This is an extraordinarily high proportion of a regional economy for one industry to comprise.

Currently, there are approximately 19,000 Head Months (HMs) permitted on the Warner Mountain Ranger District; about 18,000 HMs are cattle and 1,000 HMs are sheep. The recent average actual use on the Warner Mountain Ranger District is about 16,000 HMs; 15,000 HMs are cattle and 1,000 HMs are sheep.

There are two primary reasons for the difference between permitted and actual use under current management. Under the terms of the grazing permit, permittees are allowed to take "non-use for personal convenience" for 3 years out the 10 years of the permit term. The purpose of non-use for personal convenience non-use is to allow the permittee flexibility to deal with unforeseen personal needs. This is most often used in instances of death, illness or a change in a private business situation. The other primary reason for the difference between permitted and actual use is a type of non-use referred to as "non-use for resource protection." In this case, the Forest Service identifies a resource condition on an allotment as being in a non-functioning or functioning-at-risk condition. Some or all of the permitted numbers might be placed in non-use status for a period of time to promote resource recovery.

Implementation of utilization standards that allow less livestock utilization of vegetation than currently authorized, in selected areas, may result in decreased actual use. The purpose for proposing range improvements is to increase positive control of livestock at the lowest long-term cost. With implementation of range improvements, some permittees may be able to economically graze the full permitted numbers, even at stricter utilization standards. On the other hand, even with the positive control effects added by the range improvements, some permittees may not be able to economically comply with stricter utilization standards. The break-even point between profitable and non-profitable operations varies greatly based on the permittee's overall personal situation, and the topography and vegetative conditions on the allotment. Late in the grazing season, more monitoring and more permittee management (including herding) is required to enable compliance with standards. When the permittee can no longer afford to perform the management necessary to comply with standards, then he/she must remove the livestock from the allotment, resulting in a loss of HMs for the permittee.

If the permittee is unable to comply economically with utilization standards, the direct effect on the permittee is that the livestock must be taken off the allotment. In that case, the permittee needs to secure alternate forage immediately. Options are to lease pasture, place the removed livestock on permittee-controlled pasture, place the removed livestock on feed, or reduce herd size. Recent

experience in Modoc County is that summer pasture capacity, whether leased or permittee-owned, is nearly fully utilized. Thus summer availability of additional HMs is nearly non-existent. If this utilization compliance issue were an infrequent event, or occurred for only for a few permittees, an individual permittee might be able to secure temporary summer pasture at comparable cost, or at a slight increase in cost and inconvenience. If this utilization compliance issue affected all permittees every year, then Modoc County would have to increase summer pasture capacity by 4,000 HMs or the permittees would have to reduce herd use by 4,000 HMs.

Herd use changes in the magnitude of 4,000 HMs cannot be physically or economically accommodated in Modoc County on a monthly or seasonal basis. The most rational economic response from an average permittee would be to reduce herd use by 4,000 HMs on the National Forest. This would cause a total herd reduction of 1,000 HMs for four permitted months on National Forest land and for eight months on other rangeland under control of the permittee. Therefore, any effects to National Forest permittees will actually be tripled when viewed from the County's economic perspective.

One option, discussed above, would be to increase summer pasture capacity in Modoc County. One method to increase summer pasture capacity would be to convert arid pastureland to irrigated pastureland. Irrigation would require securing water rights or drilling wells. Most surface water in Modoc County is currently obligated under existing water rights. Drilling wells is generally not cost-effective for the purpose of supporting pasture for livestock grazing.

A second option to increase summer pasture capacity would be to convert lands to pasture that are currently devoted to hay cropping. Hay cropping provides winter feed and, for a given time period, produces much greater forage supply than does pasturing. This conversion would significantly reduce winter-feed supplies in the County, or reduce revenue from hay crops. The conversion would not be cost-effective.

A third option would be to place livestock on feed for the one month they would have to be removed from the National Forest. This option would significantly increase operating costs. As a temporary solution it might be feasible, but as a permanent solution, herd reduction would be more cost-effective.

Under current management, only 16,000 HM of the 19,000 HM of permitted livestock grazing is being utilized on the Warner Mountain Ranger District. The shortfall occurs in order to permit compliance with current utilization standards and to accommodate cost-effective individual permittee operations. Under the **No Grazing** Alternative, natural resource conditions would move toward desired ecological conditions at an appropriate rate. However, there would be no potential for cost-effective permittee operations. Under the **Stewardship Alternative**, it is projected that all of the approximate 19,000 HMs under grazing permit on the Warner Mountain Ranger District could be utilized annually. The return to utilization of full permitted numbers would occur while moving natural resource conditions towards desired conditions at an appropriate rate, and would also allow for cost-effective permittee operations.

Culture, Lifestyle and Quality of Life in Local Communities is an assessment of the changes in community activities and services that are predicted as a result of varying levels of livestock grazing on the Warner Mountain Ranger District. Some indirect indicators of community activities and services would be the following: numbers of businesses, types of businesses, job opportunities, and age distribution of the populations within the communities. These indirect indicators reflect the potential for high quality educational opportunities within the school systems and the library system;

cultural opportunities, such as theater, music and other arts; and sports activities, such as community swimming pools and tennis courts. These indirect indicators also reflect the ability of children raised in the local communities to raise their own families in Modoc County, versus having to move elsewhere to secure a sufficient family wage. The communities in Modoc County that could be most affected by the Warner Mountain Rangeland Project are the following: Alturas, Likely, Davis Creek, New Pine Creek, Fort Bidwell, Lake City, Cedarville, and Eagleville.

The economic vitality of a region is indirectly indicated by the presence or absence of vacant business locations in a community in conjunction with the presence or absence of newly constructed business sites. All of the above mentioned communities currently have numerous vacant business locations, with very little new construction of business sites. Over the past several decades, all of these communities have experienced a reduction in the diversity of businesses, with many types of businesses now absent from communities where they once thrived. The list includes auto dealerships, farm implement dealerships, hardware stores, drugstores, feed stores, grocery stores, gas stations, clothing stores, and many others. The afore-mentioned changes in the livestock industry have not been the only cause of these community-wide economic changes, but they have certainly been important.

Over the past several decades, livestock industry revenues have not increased proportional to the increases in operating costs. Consequently there has been a noticeable shift toward larger and larger ranches in an effort to reduce unit-operating costs. Small livestock operations with very small profit margins have been purchased by neighbors in their effort to reduce operating costs. The trend is toward fewer and larger operations. Small livestock operations used to be run by a family unit. As these operations were consolidated to reduce unit costs, a family unit was no longer associated with that piece of land. As a consequence of the consolidation trend, there are fewer families engaged in the livestock industry. Inasmuch as other industries have not replaced the family-wage jobs lost, there has been a net reduction of family-wage jobs in the affected communities.

Thus many of the children raised in the local communities must seek employment elsewhere as they raise their own families. This is supported by demographic profiles (CSU, Chico) showing that in 1998, the percent of the population in Modoc County between ages 30 and 39 is 35% lower than the average for the state of California. This is the age bracket with a high proportion of family heads-of-household, particularly families with teenagers. These families are the segment of the population with the highest spending rates in the economy. The percent of population aged 50 and greater is 20 to 30 % higher than the average for the state of California. These shifts in age distribution of the local populations are also reflected in significantly decreasing enrollment in community schools. As enrollment has dropped, local schools have been forced to implement cost-saving measures such as the consolidation of classrooms with higher student: teacher ratios, reductions in the number of bus runs, and longer schools days.

Inclusion of Local Community Knowledge is a measure of whether members of the local community and Forest visitors believe their knowledge is fully considered in the decision-making process for the WMRP. Local community members and Forest visitors recognize that other information will also be fully considered in reaching a decision, but there is currently a perception that, in previous Agency efforts, their information was not given full consideration. This indicator is relatively subjective.

Effects:

Civil Rights effects were carefully considered in the WMRP, and are presented below as part of the effects discussions for the other SOCIO-ECONOMIC EFFECTS indicators. Included in the

discussions are the socio-cultural, or non-economic consequences; economic consequences; direct, indirect, and cumulative effects; and changes that are anticipated as a result of Agency action, as distinguished from changes that are anticipated irregardless of Agency action.

Environmental Justice has been addressed in accordance with Executive Order 12898. Effects on minorities and Native Americans were considered in this project. Implementation of the project would result in no disproportionate effects to minorities or Native Americans.

Historical and Archaeological effects have been addressed during project planning and all Alternatives comply with applicable laws and Agency direction.

Modoc County Economy effects -- direct, indirect and induced -- were quantified using the *IMPLAN* model. The *IMPLAN* projections displayed in the Table below are based on the following HMs: **Current Management Alternative** – 16,000 HM; **Stewardship Alternative** – 19,000 HM; **No Grazing Alternative** – 0 HM. The *IMPLAN* model projects that the **No Grazing Alternative** would have the greatest negative effect on the County economy, with a total ***annual loss*** to the current economy of -$1,524,667. The *IMPLAN* model projects that the **Stewardship Alternative** would have the greatest positive effect on the economy of Modoc County, with a total ***annual gain*** to the current economy of +$285,874. Since the *IMPLAN* model projects from the current situation, the **Current Management Alternative** would result in no gain or loss to the Modoc County economy. If the **Wilderness Sheep Alternative** were selected, the effects on the Modoc County economy would be negligibly different from *IMPLAN* prediction for the **Stewardship Alternative**. If the **Bald Mountain Permittee Alternative** were selected for the Bald Mountain Allotment, the results would be negligibly different from the other *IMPLAN* projections for Modoc County.

Economic Effects On The Modoc County Economy

(Monetary values calculated with *IMPLAN* Model, and expressed in Year 2000 U.S. dollars)

	Current Economic Effects of Range-Fed Cattle in Modoc County, CA	**Annual Gains or Losses From Current Program Levels, By Alternative**		
		Current Management Alternative	Stewardship Alternative	No Grazing Alternative
Direct Effects ($)	$ 7,797,299	No Change	+$173,410	- $ 924,856
Indirect/Induced Effects ($)	$ 5,056,901	No Change	+$112,464	- $ 599,811
Total Effects ($)	**$12,854,200**	**No Change**	**+ $285,874**	**- $1,524,667**
Direct Effects (# jobs)	32	No Change	+ 1	- 5
Indirect/Induced Effects (# jobs)	40	No Change	+ 1	- 6
Total Effects (# jobs)	**72**	**No Change**	**+ 2**	**- 11**

The **Stewardship Alternative** is based upon investments in range improvements requiring Agency and permittee contributions. Historical information indicates that some of these types of investments planned in prior years were not accomplished due to lack of Agency funding. If the **Stewardship Alternative** utilization standards were to be implemented, but the associated range improvements

were not implemented due to lack of funding, it is projected that an additional 4,000 HM of grazing on the Warner Mountain Ranger District would not be utilized, in addition to the 3,000 HM that are not currently utilized. If this situation were to occur, and only 12,000 HM were utilized, the IMPLAN model projects a total ***annual loss*** to the economy of Modoc County of -$381,167 from the **Current Management Alternative**.

Culture, Lifestyle and Quality of Life in Local Communities, as described above, is predicted based on measures such as the vacancy or construction of business sites, the number of jobs, and age distribution in an area. The *IMPLAN* model projects that the **No Grazing Alternative** would have the greatest negative effect on job numbers, a total ***loss*** of –11 jobs, as displayed in Table 1 above. The **Stewardship Alternative** would have the greatest positive effect on the number of jobs, with a ***gain*** of +2 jobs. Since the *IMPLAN* model is based on the current situation, the **Current Management Alternative** would result in no gain or loss to the number of jobs in Modoc County. As with the revenue impacts, the **Wilderness Sheep** and **Bald Mountain Alternatives** would have negligible effects on jobs in Modoc County as a whole. If the Stewardship Alternative were selected and the utilization standards were implemented without the associated range improvements, the *IMPLAN* model projects a ***loss*** of –3 jobs.

There is no socio-economic model that can predict changes in the number of Modoc County businesses opening or closing, or population demographic changes, as a result of the predictions of the *IMPLAN* model. It is clear that an increase in revenues and jobs, such as *IMPLAN* projects under the **Stewardship Alternative**, could support new businesses and family-wage opportunities, while a loss in revenue and jobs, such as *IMPLAN* projects under the **No Grazing Alternative**, would detract from new businesses and family-wage jobs. Decreases in revenue and family-wage jobs would result in a negative effect on the quality of life in Modoc County communities. These negative effects would be manifest in reduced quality and quantity of school services, community cultural opportunities, and recreation opportunities unless the loss from the *range-fed cattle* sector was replaced by increases in other sector(s). Substantial increases in economic activity of other sectors of Modoc County's economy, sufficient to offset losses in the *range-fed cattle* sector under the **Stewardship** and **No Grazing** Alternatives, are not anticipated in the near future by the Modoc County Government.

Inclusion of Local Community Knowledge is a subjective measure of effects. Great care was taken to ensure that input from all parties participating in the WMRP planning process was considered carefully and thoughtfully. This indicator is not a factor in Alternative selection because it was applied equally across all Alternatives.

RANGE PROGRAM

Indicators:

Balance Between Landscape Capability and Community Economy effects reflect the *balance* between predicted resource effects, and the predicted effects on the Modoc County economy, under each WMRP Alternative.

Effects:

As indicated in previous effects discussions, the **Stewardship Alternative**, **Wilderness Sheep Alternative** and **No Grazing Alternative** are all predicted to move natural resources of the

landscape towards Desired Conditions at an appropriate rate. In assessing the balance between these resource effects, and the previously described effects of these three Alternatives on the Modoc County economy, the **Wilderness Sheep Alternative** has the best balance between achieving Desired Conditions, and sustaining and contributing to the Modoc County economy. The balance under the **Stewardship Alternative** is slightly less than the balance under the **Wilderness Sheep Alternative**, and the **No Grazing Alternative** has the least balance between achieving landscape Desired Conditions, and sustaining and contributing to the Modoc County economy.

TABLE 4-1
CUMULATIVE EFFECTS OF ALTERNATIVES
Warner Mountain Rangeland Project

Instructions on utilizing this Table appear in the INTRODUCTION to **Chapter 4.**

Key to Cumulative Effects Abbreviations:

C=Current Management Alternative selected for 28 allotments; **N**=No Grazing Alternative selected for 28 allotments; **S**=Stewardship Alternative selected for 28 allotments; **W**= Adaptive Management Alternative selected for the 3 Wilderness sheep allotments, and Stewardship Alternative selected for the other 25 allotments; and **B**= Only Allotment Specific Effects of Bald Mountain Permittee Alternative on the Bald Mountain Allotment.

	Water Quality					**Riparian**					**Seeps**					**Uplands**					**Aspen**					**T E S**					**Wilderness**					**Socio-Economic**					**Range Program**				
	A l t e r n a t i v e s					**A l t e r n a t i v e s**					**A l t e r n a t i v e s**					**A l t e r n a t i v e s**					**A l t e r n a t i v e s**					**A l t e r n a t i v e s**					**A l t e r n a t i v e s**					**A l t e r n a t i v e s**					**A l t e r n a t i v e s**				
	C	**N**	**S**	**W**	**B**	**C**	**N**	**S**	**W**	**B**	**C**	**N**	**S**	**W**	**B**	**C**	**N**	**S**	**W**	**B**	**C**	**N**	**S**	**W**	**B**	**C**	**N**	**S**	**W**	**B**	**C**	**N**	**S**	**W**	**B**	**C**	**N**	**S**	**W**	**B**	**C**	**N**	**S**	**W**	**B**
Activity Type 1 **UTILIZATION STDS** ***Uplands*** a)herbaceous b)browse	5	10	5	7	2	5	10	6	8	2	3 4	10	7 6	8 7	2 2	5	6 4	5	6	2	5	8	5	5	2	5 5	10	6 5	n/a	2	3	10	5	6	n/a	5	2	5	4	5	5	0	5	6	4
Activity Type 2 **UTILIZATION STDS** ***Riparian/Springs*** a)herbaceous b)browse c)stubble height d)stream bank	3	10	6	8	2	3	10	7	8	2	3	10	7	8	2	5	8	5	6	4	4	8	7	7	3	3	10	7	7	2	3	10	6	6	n/a	8	2	5	4	6	5	0	7	6	4
Activity Type 3 **UTILIZATION STDS** ***Seeps*** a)herbaceous b)browse c)stubble height	4	10	7	8	3	4	10	7	8	3	4	10	7	8	3	5	8	6	6	4	4	8	7	7	3	3	10	7	7	2	3	10	6	6	n/a	5	2	4	4	5	5	0	7	7	5
Activity Type 4 **UTILIZATION STDS** ***Aspen*** a)herbaceous b)browse	4	8	7	8	3	4	8	7	8	8	4	8	7	8	3	5	5	5	5	5	4	8	7	8	8	4	7	6	7	2	2	10	6	8	n/a	5	2	5	4	5	4	0	5	6	5
Activity Type 5 **RANGE VEG** ***Burning*** a)natural ignition b)prescribed ignition	5	7	6	n/a	6	5	7	6	n/a	6	5	5	5	n/a	5	4	9	9	9	9	4	8	7	7	7	4	6	6	n/a	6	6 n/a	10 n/a	7 n/a	8 n/a	n/a n/a	4	6	7	5	5	4	0	7	5	7

	Water Quality					Riparian					Seeps					Uplands					Aspen					T E S					Wilderness					Socio-Economic					Range Program				
	Alternatives					Alternatives					Alternatives					Alternatives					Alternatives					Alternatives					Alternatives					Alternatives					Alternatives				
	C	N	S	W	B	C	N	S	W	B	C	N	S	W	B	C	N	S	W	B	C	N	S	W	B	C	N	S	W	B	C	N	S	W	B	C	N	S	W	B	C	N	S	W	B
Activity Type 6 **RANGE VEG** ***Mechanical & Burning***	5	8	7	n/a	7	5	8		n/a		5	9	7	n/a	7																n/a	n/a	n/a	n/a	n/a						4	0	7	n/a	7
a)aspen								7		7						5	6	6	n/a	6	4	10	8	n/a	8	5	7	5	n/a	5						5	7	5	n/a	5					
b)juniper								8		8						4	7	7	n/a	7	4	6	6	n/a	6	4	5	6	n/a	6						4	7	7	n/a	n/a					
Activity Type 7 **ALLOTMENT SPECIFIC** ***Grazing Systems***	3	8	7	7	7	3	9	7	8	7	3	9	7	8	7	5	8	7	8	7	4	8	7	8	7	4	8	7	8	4	4	n/a	6	7	n/a	5	2	6	6	6	4	0	7	7	5
Activity Type 8 **ALLOTMENT SPECIFIC** ***Allotment Boundaries***	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	n/a	5	7	n/a	5	n/a	6	7	6	5	n/a	6	6	5
Activity Type 9 **ALLOTMENT SPECIFIC** ***Permitted No.s***	5	9	5	5	4	5	9	5	5	4	5	9	5	5	4	5	9	5	5	4	5	8	5	7	4	5	8	5	5	4	5	n/a	6	7	n/a	5	2	5	4	6	5	0	5	5	4
Activity Type 10 **ALLOTMENT SPECIFIC** ***Permitted Seasons***	5	9	5	5	5	5	9	5	5	4	5	9	5	5	4	5	9	5	5	4	5	8	5	7	4	5	8	5	5	4	5	n/a	6	6	n/a	5	2	5	4	6	5	0	5	5	4
Activity Type 11 **ALLOTMENT SPECIFIC** ***Positive Control***	4	n/a	7	7	7	3	n/a	8	8	8	3	n/a	8	8	8	4	n/a	7	8	7	4	8	8	8	8	3	n/a	8	8	8	5	n/a	6	6	n/a	5	2	7	5	7	4	n/a	8	n/a	8
a)fences/cattleguards																																													
b)water developments																																													
c)salting																																													
d)herding facilitation																																													
e)herding (riding)																																													
Activity Type 12 **WATERSHED IMPROVEMENTS**	3	8	8	n/a	n/a	3	8	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	8	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	5	5	n/a	n/a	4	5	5	n/a	n/a
Activity Type 13 **MONITORING** ***Annual Implementation***	3	n/a	8	9	2	3	n/a	9	9	2	2	n/a	8	9	2	5	n/a	8	9	2	3	n/a	8	9	2	3	5	9	9	2	2	n/a	6	8	n/a	3	5	7	7	8	5	0	8	8	4
Activity Type 14 **MONITORING** ***Long Term Effectiveness***	6	6	8	8	7	6	6	9	9	7	2	6	9	9	7	3	n/a	7	8	3	3	n/a	8	9	2	3	5	9	9	4	3	n/a	6	8	n/a	3	5	7	7	8	3	0	8	8	6

Appendices

Appendix A

GLOSSARY

ADAPTIVE MANAGEMENT

Adaptive Management is the process of adjusting management strategies based on monitoring results. In the case of the WMRP, such adjustments can only be made after 3-5 years of implementation of a proposed action.

GRAZING SYSTEMS

Grazing systems are authorized for specific portions, or pastures, within an allotment. All pastures within an allotment may be authorized under the same grazing system, or an allotment may include pastures under different grazing systems. The grazing system(s) authorized for each allotment is/are identified in the Annual Operating Instructions, which become part of the Term Grazing Permit. The utilization standards applied to each pasture are determined by the grazing system, in combination with the ecological condition of the pasture. Utilization standards are more fully described in the Utilization Standards section below.

Season-Long System: Under a season-long grazing system permitted livestock are authorized to be anywhere on the allotment from the permitted turn-out date until the permitted off-date, as long as utilization standards are not exceeded. Movement of livestock within the allotment is at the discretion of the permittees, as long as grazing utilization standards are not exceeded. Under this system, vegetation on the allotment may be impacted by livestock grazing throughout the growing season. Grazing many plant species throughout the growing season, or grazing these plants at both the beginning and end of the growing season, retards their health and vigor. Therefore, certain utilization standards are more restrictive in riparian areas under this grazing system than under other grazing systems.

Deferred System: Under a deferred grazing system permitted livestock are authorized to graze in certain portions of the allotment for specified periods of time, as long as utilization standards are not exceeded. Under this system the vegetation on the allotment is grazed for only one portion of the growing season, and therefore certain utilization standards are less restrictive in riparian areas under this grazing system than under a season-long system.

Rest-Rotation System: A rest-rotation grazing system is similar to a deferred system, except that a portion of the allotment is not grazed each season. As under a deferred system, utilization standards may not be exceeded. As under a deferred system, the vegetation in a rest-rotation pasture that is not in rest for that year, is grazed for only one portion of the growing season. Since pastures with rest-rotation systems allow vegetation an entire season of rest on a periodic basis, certain utilization standards are less restrictive in riparian areas under this grazing system than under a deferred system.

Early-Season with Re-growth System: An early-season with re-growth grazing system is similar to a deferred system, except that the pasture is identified as having sufficient time for re-growth during the grazing system. On the Warner Mountain a minimum of 45 days of growing season is necessary for a pasture to be authorized as an early-season with re-growth pasture. As under a

deferred system, utilization standards may not be exceeded. As under a deferred system, the vegetation in an early-season with re-growth pasture, is grazed for only one portion of the growing season. Due to the time of year of grazing, certain utilization standards are less restrictive in riparian areas under this grazing system than under a rest-rotation or deferred system.

HEAD MONTHS

Head Month is one month's use and occupancy of the range by one animal. For grazing fee purposes, it is a month's use and occupancy of range by one weaned or adult cow with or without calf, bull, steer, heifer, horse, burro, or mule, or 5 sheep or goats.

HERDING STRATEGIES

Herding strategies include a variety of actions, briefly defined below.

Holding Field or Corral: A site, either permanently or temporarily fenced, may be designated as a holding field or corral. Holding fields and corrals are used to contain livestock for brief periods of time to facilitate cost effective gathering and movement of livestock herds.

Livestock Trail: To facilitate herd movement, certain non-recreation trails may be designated as livestock trails. Permittees are authorized to remove encroaching vegetation on these trails to facilitate herd movement.

Salting: Salting is the practice of the permittee placing a livestock dietary requirement or supplement, often in the form of a consolidated block, in a location that will facilitate livestock management by attracting livestock to that location.

Herding: Herding is the practice of a person causing livestock to move from one location to another in order to meet livestock management objectives. Herding can be utilized in association with, or as a substitute for, fence construction. Sheep have traditionally been tightly herded. Much of the need to herd sheep originates in a need to reduce animal losses. If isolated from the band, sheep can be easily killed by predators, or not voluntarily return to the band. Shepherds, usually with dogs, can keep sheep in a compact band, and can directly influence the location, duration and intensity of sheep grazing. Herding of cattle on the Warner Mountain is generally accomplished horseback, although Off-Highway Vehicles and pick-up trucks may be successfully used in certain locations.

MONITORING

Annual (Implementation) Monitoring: Annual monitoring is the monitoring of implementation of the Annual Operating Instructions and Term Grazing Permit. This includes monitoring of: pre-season range readiness; annual maintenance of range improvements; compliance with permitted livestock utilization standards, and timing and location of use. Scheduled annual monitoring is conducted on Key Areas. Key areas are locations identified prior to grazing season, and are areas with concerns related to Term Grazing Permit compliance. Annual monitoring may or may not occur on all Key areas on any allotment. Unscheduled annual monitoring of non-key areas may take place for particular situations.

Long-term (Effectiveness) Monitoring: Long-term Monitoring is the repeated measurement of specified ecological indicators, in specified locations, over time, to determine whether the livestock management practices being implemented are, in fact, moving toward desired rangeland and riparian conditions.

RANGE IMPROVEMENTS

Range improvements are those structures installed and maintained for the purpose of facilitating livestock permittees in cost-effective management of their livestock. The cost of installing range improvements is shared between the Forest Service and the livestock permittees, however, the United States owns the range improvements once they are installed. Other than cattleguards, livestock permittees bear the full cost of maintenance of range improvements on their allotments. Briefly defined below are the range improvements included in one or more of the Alternatives Considered in Detail.

Water Developments: Water developments are those structures installed to provide water for livestock where it does not naturally exist. Water developments may be constructed stock ponds, spring developments, and ditches or pipe systems bringing water from a water source to another location. Water developments are usually designed to accomplish one of three purposes: to provide water in areas where no natural surface water exists; to increase the availability of water to livestock where surface water naturally exists; and to provide alternative water locations in the vicinity of riparian areas and seeps needing particular protection from livestock. In addition to these structures, water flow at some springs and seeps can be increased by the removal of dense stands of juniper, white fir or ponderosa pine within a specified distance around the water source, without removal of trees necessary for shading of the water source.

Fences: Properly located, constructed and maintained fences facilitate cost-effective management of livestock where natural barriers to livestock movements do not exist. Fences may be constructed in a variety of ways depending on the location and management objectives, but all allow the free movement of deer, elk and antelope. Briefly described below are fence types included in one or more of the Alternatives Considered in Detail.

Barbed wire and post fence are among the least labor-intensive type of fence to build. In known areas of elk use, the top wire is made more visible to reduce fence damage from elk. Elk can usually jump over these fences if they can clearly see the top wire. In areas of antelope movement, the bottom wire is raised to 18" above ground and is a smooth wire with no barbs. Barbed wire and post fence has a high maintenance cost due to animal damage, snow load and vegetation damage. Vegetation damages fences when trees or shrubs or parts of thereof fall on fences or when vegetation grows between the wires and stretches and breaks the wires. Locations away from overhanging vegetation or dense brush can reduce maintenance costs.

A special case of the barbed wire and post fence is the "let-down" fence. Construction techniques and hardware are used that allow a person to relatively easily let the fence wires fall to the ground after grazing is completed in the fall of the year, and also allows for relatively easy attachment of the wires onto the post in the spring before grazing begins. Properly constructed and located let-down fences can reduce overall fence maintenance costs in areas of high snow loads. Deep winter snow can freeze to the wires and cause wire breakage, and/or pushing of posts into the ground. When pushed far enough, the wires no longer provide a barrier to livestock movement.

Vegetative debris fences are probably the least expensive and least labor-intensive type of fence to build. This type of fence is constructing without any processing of the natural material, to make it suitable for the intended use. This is a fence construction method of opportunity. This type of fence can only be constructed where there is standing vegetation to be removed, and there is a need to block movement of livestock. The most common application of this type fence is in aspen management where there is a desire to remove conifers that are competing with aspens, and a desire to protect tender aspen reproduction from grazing by livestock. Debris fences are constructed by felling the conifers so that crowns and boles interlock in a low vegetative fence that blocks livestock movement but not wildlife movement. This method has limited application, and is not used in areas of high visual sensitivity or high fuel hazard.

Natural material fences can be made from a variety of natural materials with a variety of construction techniques. This type of fence differs from debris fences, in that the natural fence materials have experienced some level of processing to make them acceptable for the proposed use. These types of fences always are most labor-intensive. These types of fences can have low materials costs if there is a local source of saplings (juniper, pine or white fir) needing thinning, or juniper or cedar that can be split into rails. This type of fence can have high materials costs if value-added wood products such as peeler-core bolts or redwood fence posts are used. This type fence requires lower maintenance in high snow load areas. This type fence is often used in visually sensitive areas. In areas of heavy use by elk and deer, natural material fences are often used because of the visibility and low maintenance costs.

Electric fences are easy to construct fences for temporary use. Electric fences usually consist of one or two electrified wires hung on plastic posts that can be easily driven into the ground and later pulled out. Electric fences are powered by photovoltaic cells attached to the wire. The shock received from the electrified wire deters livestock from going through the wires. Electric fences can easily be made non-functional by vegetation falling on it or animals breaking it.

When a fence no longer meets livestock control needs, a fence removal project is proposed.

Cattleguards: A cattleguard is a structure built into a road where a fenceline crosses the road, and obviates the need for a gate across the road. A cattleguard is built such that vehicles can cross over the cattleguard but livestock cannot. On some infrequently traveled roads, gates are a cost-effective way to ensure the positive control afforded by a fence, while still allowing vehicle passage. However, gates are sometimes left open when they should be closed, and on more heavily traveled roads, the frequency of gates being left open increases. To ensure the positive control afforded by fences and to reduce inconvenience to motorists, cattleguards are installed on more heavily traveled roads. Cattleguards require periodic maintenance to remain effective.

RANGELAND VEGETATION and RIPARIAN RESTORATION

Rangeland vegetation and riparian restoration activities promote the health and vigor of rangeland ecosystems and watershed function. While these improvements may increase forage for livestock, their primary purpose is rangeland and watershed restoration. Briefly defined below are the rangeland and riparian restoration activities included in one or more of the Alternatives Considered in Detail.

Prescribed Fire: Prescribed Fire is fire that is intentionally ignited and managed under a series of carefully prescribed conditions, for the purpose of achieving specific vegetation restoration and management objectives.

Wildland Fire Use: Wildland Fire Use is fire ignited by natural cause, which is allowed to burn within predetermined conditions for the purpose of achieving specific vegetation restoration and management objectives.

Mechanical Treatments: Mechanical Treatments are physical relocation or re-arrangement of vegetation, with or without subsequent Prescribed Fire. In some vegetation situations, mechanical treatment alone may achieve vegetation restoration and management objectives, while in other vegetation situations, it is necessary to follow mechanical treatment with Prescribed Fire.

Stream Restoration: Stream restoration projects identified as part of the WMRP would restore stream banks at three road crossing locations where culverts have been removed and banks are sloughing.

UTILIZATION STANDARDS

One set of tools with well-documented effectiveness for controlling the intensity of grazing at a particular site are utilization standards. The LRMP identifies four types of utilization standards that, in various combinations, have been found to be most effective on the Modoc National Forest. Utilization standards are site-specifically prescribed based upon grazing system(s), and existing and desired ecological conditions. Utilization standards are identified in the Annual Operating Instructions, which become part of the Term Grazing Permit. Methods for measuring utilization are described in ***Appendix D - MONITORING PLAN***. The four types of utilization standards are briefly defined below.

Herbaceous Utilization (%): Herbaceous Utilization is a measure of the amount of desirable herbaceous vegetation consumed by livestock at a particular site, as a percent of the total amount of desirable herbaceous vegetation produced at the site from the start of the year's growing season until the time the livestock leave that site for the season.

Browse Utilization (%): Browse Utilization is a measure of the amount of desirable browse vegetation consumed by livestock at a particular site, as a percent of the total amount of desirable browse vegetation produced at the site from the start of the year's growing season until the time the livestock leave that site for the season.

Stubble-height (inches): Stubble Height is the average height of herbaceous vegetation remaining within the riparian zone at the end of the growing season.

Streambank Alteration (%): Streambank Alternation is the percent of streambank that has been degraded by livestock trampling during the current grazing season.

Appendix B

AFFECTED ENVIRONMENT

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LAWS

In the development of issues, compliance with laws is not optional. The method of compliance can be an issue. The following discussions will describe how this project will comply with several laws that are particularly relevant to this Project. Compliance with current management direction can be an issue. Usually, management direction is broad, and allows for many options within that direction, dependent on site-specific conditions. Deviations from current management direction usually occur when current science supercedes the science used to formulate previous direction. In this case, new management direction is developed using the current science. More discussion of this possibility will occur later. When laws and current or new management direction are complied with, many times there are several options which are consistent with the Purpose and Need for proposing actions. In that case, many issues may rise from a review of public opinion. These issues arise from legitimate differences in opinion based on individual value systems.

There are many laws governing the management of national forests. Compliance with some laws is established during the forest-wide planning process that produces the Forest Land and Resource Management Plan (***LRMP***). Then as site-specific projects are proposed, compliance with those laws is established through compliance with the management direction of the ***LRMP***. Some laws have site-specific requirements that cannot be complied with through the ***LRMP*** process. Rather, compliance with site-specific legal requirements can only be accomplished through site-specific environmental analysis and decision making. The following is a description of how site-specific analysis and decision making comply with those laws that have site-specific requirements.

Clean Water Act - The Clean Water Act of 1965, as amended, places primary responsibility for protecting water quality with the States. Section 313 of the Act requires Federal agencies to comply with all substantive and procedural State water quality requirements to the same extent as any nongovernmental entity. Sections 208 and 319 of the Clean Water Act address non-point source pollution, which is an important concern in the management of livestock grazing. States are required to identify categories of and particular non-point sources of pollutants, and develop and monitor Best Management Practices (BMPs) to prevent non-point source pollution. The National Forests in California have a management agreement with the State of California that recognizes the Forest Service as the management agency for non-point sources on National Forest System lands. This agreement explains the respective responsibilities of the Forest Service and the State, the State non-point source management requirements (BMPs) that are designed to minimize the impacts on identified users of water, monitoring to ensure that BMPs are implemented, monitoring to determine BMP effectiveness, mitigation to correct unforeseen problems, and adjustment of BMP design where appropriate. The State of California has certified these BMPs and the U.S. Environmental Protection Agency has approved them as being the most rigorous means of non-point pollution control for the State of California.

Clean Water Act compliance is obtained through implementation of the following Best Management Practices (BMPs) for rangeland management:

BMP 6.2 - Consideration of Water Quality in Formulating Fire Prescriptions;
BMP 6.3 - Protection of Water Quality from Prescribed Burning Effects;
BMP 8.1 - Range Analysis and Planning;
BMP 8.2 – Grazing Permit Administration; and
BMP 8.3 – Rangeland Improvements.

Some proposed vegetative treatments prescribe the removal of conifer tree boles (white fir, ponderosa pine and juniper) as an integral action of the treatment. In those cases, the following BMPs normally implemented on timber sales will be implemented in these vegetation treatment projects:

BMP 1.6 - Protection of Extremely Unstable Lands
BMP 1.8 - Streamside Management Zone Designation;
BMP 1.9 - Determining Tractor Loggable Ground;
BMP 1.10 - Tractor Skidding Design;
BMP 1.12 - Log Landing Location;
BMP 1.16 - Log Landing Erosion Prevention and Control;
BMP 1.17 - Erosion Control on Skid Trails;
BMP 1.18 - Meadow Protection During Timber Harvesting; and
BMP 1.19 – Streamcourse Protection

The full text of these BMPs is available in the Process Records.

Clean Air Act - The Clean Air Act of 1963, as amended, places primary responsibility for protecting air quality with the State of California. The State of California is required to identify categories of and particular sources of pollutants, and practices to prevent non-point source air pollution. The Warner Mountain Rangeland Project falls within the Northeast Plateau Air Basin, as identified in the State Implementation Plan. The State of California has delegated designation of acceptable practices and compliance procedures to local or regional Air Pollution Control Districts (APCD). The Warner Mountain Rangeland Project is within the jurisdiction of the Modoc County APCD. The only proposed activity with potential to cause measurable, negative air quality effects, is vegetative burning. For all proposed burning projects in excess of 10 acres, the Modoc National Forest is required to submit burn plans and smoke management plans for review by the Modoc County APCD. All burn plans and smoke management plans are prepared so that they meet Modoc County APCD regulations.

Endangered Species Act (ESA) - The Endangered Species Act of 1973 requires that habitats for and populations of species listed as Threatened or Endangered (T&E) or proposed for listing be managed to maintain viable populations of those species. These are collectively referred to as T&E species. In addition, the Endangered species Act also requires that habitats for and populations of species that are not listed but are in danger of being listed, be managed to preclude the necessity for listing. These species have been identified as Regional Forester's Sensitive species.

As part of the NEPA process for grazing permit authorizations, a Biological Assessment (BA) is completed to determine the potential effects on species that are federally listed as Threatened, Endangered, or proposed for listing. The results of the BA determine whether consultation or conference with the U.S. Fish and Wildlife Service (FWS) is required. If a "may affect" determination is made in a BA, then consultation is initiated with the U.S. Fish and Wildlife Service. Mitigation measures or new alternatives are proposed to ensure that effects will not jeopardize the continued existence of the T&E species. Endangered Species Act compliance includes all practices required to meet Endangered Species Act standards, including surveys for Threatened, Endangered or Sensitive species if need is indicated.

As part of the NEPA process for grazing permit authorizations, the Biological Evaluation (BE) process is used to determine the potential effects on Regional Forester's Sensitive species. The BE determines either a "no effect" finding or a finding that proposed actions "may affect" the species

and lead to a trend toward listing. A "no effect" finding may affect individuals of the species but does not adversely affect the species and does not lead to a trend toward listing.

The **National Environmental Policy Act (NEPA)** of 1969, as amended, is a national charter for protection of the environment. Regulations which implement NEPA insure that environmental information, particularly environmental consequences, is available to public officials and citizens before decisions are made and before actions are taken. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail. The NEPA process emphasizes that it is not better documents, but better decisions that is important.

The Council on Environmental Quality in the Executive Office of the President made regulations for implementing the procedural provisions of NEPA. These regulations are found at 40 CFR Parts 1500-1508. These regulations are binding on all Federal agencies for implementing the procedural provisions of NEPA. The procedural provisions of NEPA and the regulations must be read together as a whole in order to comply with the spirit and the letter of the law. It is the intention of the Council (1500.3) that any trivial violation of the regulations not give rise to any independent cause of action.

National Historic Preservation Act - The National Historic Preservation Act of 1966, as amended (16 U.S.C. 470) defines that "permits" are undertakings subject to the requirements of section 106 of the Act. As part of the NEPA process for grazing authorizations, a national Programmatic Agreement (1995) between the Advisory Council on Historic Preservation (ACHP) and the USDA Forest Service, and a related Programmatic Agreement (1996) between the California State Historic Preservation Officer (SHPO) and USDA Forest Service, California National Forests agrees that grazing programs on the National Forest shall be administered in accordance with stipulations defined in the two Programmatic Agreements (PAs) to satisfy the responsibilities under Section 106 of the NHPA for all individual undertakings of the program. These PAs are included in the NEPA project analysis file and are incorporated here by reference. Impacts on cultural resources are greatest and most predictable where use patterns place the greatest number of livestock in the smallest area, as in concentration points in corrals, near water sources, etc. However, these concentration points can in many ways be controlled by means of placement and management of water troughs, salt blocks, fences, and transport facilities. The California PA concludes: "While it is conceivable that livestock on an archeological site could impact site components, there is no evidence that livestock activities in California Forests are causing systematic, adverse damage to sites such that it would be desirable to recommend cessation of all grazing within all allotments or within areas containing many archeological resources." No sites, for which analyses need to be performed, have been identified to date to occur within any allotments in the project area. If such sites are identified in subsequent inventories, actions will be taken to identify the nature of the effects and devise acceptable mitigative measures.

For project specific undertakings proposed (such as vegetative treatments, stock tanks, fences, spring developments, etc.) within these allotments, further Section 106 compliance action will be undertaken on a case-by-case basis. Pursuant to the Region 5 "No Effect" Programmatic Agreement (PA) with the State Historic Preservation Office, all projects covered by this document will receive heritage resource inventory provided such inventory has not already been conducted. Each project or group of projects, as appropriate, will be documented according to one of the following sections of the PA: Section D (1): Projects where no sites are present, Section D (2): Projects where

management measures are not necessary for the protection of historic properties, and Section D (3): Projects where management measures are necessary for the protection of historic properties. In cases where Section D (3) is invoked, a short-form Archaeological Survey Report will be prepared. As a general rule, any heritage resource sites discovered within the area of potential effect for any project will be flagged and avoided resulting in "no effect" on heritage resources. However, should circumstances permit and where funding may become available, the District may elect to evaluate a cultural resource in order to determine its eligibility for the National Register of Historic Places.

Wilderness Act - The Wilderness Act, (PL. 88-577) of September 3,1964 defined wilderness for the purposes of establishing and managing the National Wilderness Preservation System. It also provided management direction by prohibiting certain uses and allowing others. Special provisions of the 1964 Wilderness Act allowed for livestock grazing, stating in section 4(d)(4)(2) that, "the grazing of livestock, where established prior to the effective date of this act, shall be permitted to continue subject to such reasonable regulations as are deemed necessary by the Secretary of Agriculture."

Despite the language of section 4(d)(4)(2) of the Wilderness Act, and despite a history of addressing and providing guidance to the wilderness management agencies for development of Wilderness management policies, Congressional committees became increasingly disturbed that National Forest administrative regulations and policies were acting to discourage grazing in wilderness, or unduly restricting on the ground activities necessary for proper grazing management. Rather than amend section 4(d)(4)(2) of the Wilderness Act, to clarify their intentions, congress instead chose to reaffirm the existing language of the section and to include nationwide "guidelines" and specific statements of legislative policy better known as Congressional Grazing Guidelines. As stated in the Congressional Grazing Guidelines, "Section 4(d)(4)(2) of the Wilderness Act states that grazing in wilderness areas, if established prior to designation of the as wilderness, "shall be permitted to continue subject to such reasonable regulations as are deemed necessary by the Secretary of Agriculture". To clarify any lingering doubts, the committee wishes to stress that this language means that there shall be no curtailment of grazing permits or privileges in an area simply because it is designated as wilderness. As stated , in the Forest Service regulations (36 CFR 293.7), grazing in wilderness areas ordinarily will be controlled under the general regulations governing grazing of livestock on National Forests. This includes the establishment of normal range allotments and allotment management plans. Furthermore, wilderness designation should not prevent the maintenance of existing fences or other livestock management improvements, nor the construction and maintenance of new fences or improvements which are consistent with allotment management plans and/or which are necessary for the protection of the range."

The Congressional Grazing Guidelines also state that "grazing management in wilderness should be that activities or facilities established prior to the date of an area's designation as wilderness should be allowed to remain in place and may be replaced when necessary for the permittee to properly administer the grazing program." Thus, if livestock grazing activities and facilities were established in an area at the time Congress determined that the area was suitable for wilderness and placed the specific area in the wilderness system, they should be allowed to continue. With respect to areas designated as wilderness prior to the date of The Wilderness Act, these guidelines shall not be considered as a direction to re-establish uses where such uses have been discontinued.

MANAGEMENT DIRECTION

Development of this Environmental Assessment (EA) follows the implementing regulations of the National Forest Management Act of 1976 (NFMA), Title 36: Code of Federal Regulations Part 219 (36 CFR 219); National Environmental Policy Act of 1969 (NEPA), Title 40; and Code of Federal Regulations, Parts 1500-1508. This EA is tiered to the Modoc National Forest Land and Resource Management Plan (***LRMP***) - Final Environmental Impact Statement (1991).

Forest Service management direction is to use the best, current science available. In preparation for development of a Proposed Action, the Forest Service Interdisciplinary Team completed extensive reviews of current literature, to determine if the previous literature upon which the current Management Direction is based was still valid. All literature reviewed is listed in ***Appendix H***.

This EA incorporates direction provided in the ***LRMP***, unless a review of current science indicates otherwise. If current science supercedes the science used to develop current ***LRMP*** direction, the current science used in that determination will be clearly referenced and described. The ***LRMP*** guides natural resource management activities and has established management direction and Standards and Guidelines for management of the Modoc National Forest. The Forest-wide Standards and Guidelines (S&G's), as amended or revised, describe environmental protection measures to be applied to all lands on the Modoc National Forest unless superseded by the specific management area S&G's (***LRMP***, pages 4-13 to 4-146). Management Area Standards and Guidelines describe measures to be applied to geographic subdivisions of the Forest, each with unique resource management emphasis. There are 22 Management areas on the Modoc National Forest, detailed in Chapter 4 of the ***LRMP***. The Warner Mountain Ranger District encompasses six (6) of these Management Areas. Each Management Area has specific management direction and S&G's (***LRMP***, pages 4-148 to 4-171).

During early discussion of the Desired Condition and the existing condition, the Interdisciplinary Team identified many potential issues. These potential issues were evaluated using a new decision support model called the "Decision Protocol". The Decision Protocol was developed in the Washington Office of the Forest Service, for use by field units in conducting analyses from which decisions can be more effectively and efficiently made. The Decision Protocol applies current decision-making science to all aspects of an analysis. In the WMRP, the Decision Protocol was useful in defining the relevance, measurability and economic feasibility of measurement for the potential issues, from which the issues which could be reasonably carried forward were determined.

BIG GAME SPECIES

Mule Deer *(Odocoileus hemoines californicus)*

The ***LRMP*** contains the following standards and guidelines with respect to mule deer and rangeland management for the WMRP:

- Manage the summer and transition ranges for each herd to provide a 20/80 to 40/60 ratio of thermal cover to forage on each management area.
- Analyze the effects of livestock grazing on seasonal forage requirements in assessing capacity and stocking levels for all allotments, and in developing AMPs.

Much of the mule deer forage in the WMRP has been identified as not at Desired Condition due to the decadent stands of brush. Forage nutritional quality and palatability is less than desired in these areas. Many aspen stands in the WMRP area lack age class diversity, and are being encroached upon by conifers. The **Stewardship** and **No Grazing Alternatives** emphasize restoration of riparian brush and aspen vegetation in many of these areas.

Hiding cover is an attribute of mule deer habitat not specifically addressed with a standard or guideline in the ***LRMP***. However, in the WMRP *Stewardship Alternative Monitoring Plan*, the long term trend monitoring of hiding cover for mule deer is prescribed (***Appendix D***, page D-9).

Riparian habitats are very important to mule deer, as are brush areas and aspen stands. Riparian habitat management is a focus for the WMRP and achieving Desired Conditions will provide high quality mule deer habitat.

Elk *(Cervus elaphus)*

The LRMP does not specifically address management of elk. However, *The Greater Modoc Area, A Strategic Plan for Elk Management*, was completed in March 2000 by the Modoc Elk Working Group. Preparers of the Plan include representatives from: Modoc County Board of Supervisors, Rocky Mountain Elk Foundation, California Mule Deer Foundation, Pit River Tribal Council, Fort Bidwell Indian Community, California Department of Fish and Game, USDI-Bureau of Land Management, Alturas and Surprise Resource Areas, USDI-Modoc National Wildlife Refuge, University of Nevada, Reno, Modoc County business, Modoc County Land Use Committee, Modoc/Washoe Experimental Stewardship Program, Modoc County Fish, Game and Recreation Commission, Modoc County Cattlemen's Association, Goose Lake Resource Conservation District, Timber Interests, University of California Extension-Modoc County, Modoc County Farm Bureau, and the Modoc National Forest.

Riparian habitats are very important to elk, as are brush areas and aspen stands. Riparian habitat management is a focus for the WMRP and achieving Desired Conditions will provide high quality elk habitat. As indicated in the discussion for mule deer, much of the brush in the WMRP has been identified as not a Desired Condition due to its decadent condition. Forage nutritional quality and palatability is less than desired in these areas. In addition, many aspen stands in the WMRP area lack age class diversity, and are being encroached upon by conifers. The **Stewardship,** and **No Grazing Alternatives** emphasize restoration of riparian brush and aspen vegetation in many of these areas, and the Wilderness Sheep Alternative also focuses on achieving riparian, brush and aspen desired conditions through grazing management and prescribed natural fire.

UTILIZATION STANDARDS

Utilization standards are the tool used to determine intensity of grazing for a particular site on an annual basis. See ***Appendix A - Glossary*** for descriptions of types of utilization standards. The ***LRMP*** describes appropriate utilization standards. In some cases, these standards are described as a range that is applicable over a wide range of site-specific conditions. The intention of the ***LRMP*** was to site-specifically assign standards to specific places on the ground, based on site-specific ecological conditions.

Under the **Current Management Alternative,** no attempt was made to characterize site-specific ecological conditions, except where unsatisfactory ecological conditions were identified through some type of incidental monitoring or through environmental analysis of proposed Allotment Management Plans (5 allotments). The following utilization standards, commonly referred to as Interim Forest Plan Standards, are currently included in Allotment Management Plans which do not have environmental analysis and decisions:

- The maximum allowable level of livestock utilization of herbaceous species is 50%;
- The maximum allowable level of utilization of browse species is 40%, combined use by livestock and wildlife;
- The minimum stubble-height remaining in riparian areas after grazing is 3-5";
- The maximum stream-bank disturbance is limited to 20% or less; and
- The above levels of utilization may be further modified through: 1) site-specific recommendations resulting from the Biological Assessment/Evaluation process where Threaten, Endangered or Sensitive species are present; 2) site-specific NEPA analysis and decisions; and 3) as a result of administrative actions supported by monitoring and evaluation.

In **Chapter 3,** the TABLES for each allotment list the utilization standards applicable to that allotment under each Alternative. For the **Stewardship** and **Wilderness Sheep Alternatives,** the utilization standards for each allotment were determined using the "Warner Mountain Rangeland Project Utilization Standards". The only exceptions to this action will be for riparian areas adjacent to Twelvemile Creek on the Bidwell and Mt. Bidwell Allotments. The utilization standards for these riparian areas were set to provide habitat that ensures viability of the Warner sucker, a Federally-listed (threatened) species. The U.S. Fish and Wildlife Service concurred in a biological opinion that those standards will not jeopardize the continued existence of the species. These standards are slightly more restrictive to grazing than those that would be employed under the Warner Mountain Rangeland Project Utilization Standards. Therefore, the existing standards will be retained for these riparian areas.

The "Warner Mountain Rangeland Project Utilization Standards" is a methodology for consistent, site-specific implementation of the ***LRMP*** utilization standards. Site-specific implementation of these utilization standards is based upon the Ecological Condition of the vegetative community. The Ecological Condition rating is determined using the descriptions in ***Appendix C – ECOLOGICAL CONDITION DESCRIPTIONS***. Ecological conditions identified are: Unsatisfactory and Satisfactory.

The Ecological Conditions have been determined based on current knowledge of conditions. If new information indicates that a change in the rating of the existing Ecological Condition is warranted, then the Utilization Standards for that site will change appropriately. Implementation of the Stewardship Alternative is designed to change some vegetative communities from the existing Ecological Condition to one closer to the Desired Condition. Where this occurs, identification of the new Condition will result in a change of Utilization Standards appropriate for that Condition.

The "Warner Mountain Rangeland Project Utilization Standards" prescribe separate sets of standards for each of the four vegetative communities (Uplands, Riparian, Aspen and Seeps). Following are those proposed sets of standards.

Upland

Two standards are employed to manage livestock use in Upland vegetative communities: Utilization of herbaceous vegetation and utilization of woody species. The Upland herbaceous utilization standard measures the use of herbaceous vegetation within the Upland community and the woody browse standard measures the use on the current years' growth on hardwoods, such as willows, snowberry or scattered aspens.

For use in determination of upland utilization standards in ***Appendix C***, the Ecological Condition rating has two parts, vegetative component and functioning condition. The vegetative component rating for upland areas is determined using the descriptions in ***Appendix C***. Functioning conditions are described as proper functioning condition, functioning at risk, or non-functioning. The functioning condition rating is defined in ***Appendix C***. Both components are combined in ***Appendix C*** to determine Ecological Condition.

All upland vegetative communities are judged to be Satisfactory/Proper Functioning Condition, except where specifically identified otherwise. No such sites have been identified. If upland areas other than Satisfactory/Proper Functioning Condition are discovered during implementation of this Alternative, the appropriate utilization standards will be applied to those areas.
The Upland Utilization Standards are as follows:

Ecological Condition	Herbaceous Use Standard	Browse Use Standard
Unsatisfactory/Non-functioning	0-30%	0-20%
Unsatisfactory or Satisfactory/ Functioning at Risk	30-40%	≤20%
Satisfactory/Functioning	≤50%	≤20%

(The symbol ≤ reads "is equal to or less than")
(The symbol + reads "or greater")

Where ranges of use are indicated, the site conditions will determine actual number.

Riparian

For the WMRP, riparian areas include streams, tributary springs and associated wet or dry meadows. Four different standards are employed to manage livestock use in riparian communities: Utilization of herbaceous vegetation, both overall, and specifically at the water edge; utilization of woody species, and adverse annual streambank alteration by livestock.

For use in determination of riparian utilization standards in ***Appendix C***, the Ecological Condition rating has two parts, vegetative component and stream channel hydrologic function. The vegetative component rating for riparian areas is determined using the descriptions in ***Appendix C***. The stream channel hydrologic function is described as properly functioning, functioning at risk, or non-functioning. The stream function rating is determined using the procedures described by USDI, Bureau of Land Management, 1995. The two ratings are combined in ***Appendix C*** to determine Ecological Condition. For purposes of application of the riparian standards, the Unsatisfactory

Ecological Condition is sub-divided by the stream function condition (see matrix below). For purposes of application of the herbaceous riparian utilization standard, a third Ecological Condition of "Good" is used. A "Good" Ecological Condition is a Satisfactory Ecological Condition with Properly Functioning Condition of the stream and a full (100%) expression of the vegetative component.

All Riparian vegetative communities are judged to be in Satisfactory/Properly Functioning Condition, except where specifically identified otherwise. Numerous riparian sites have been identified as being in other than Satisfactory/Properly Functioning Condition. Where these sites have been identified, they have been discussed specifically by allotment in **Chapter 3**. If other such areas are discovered during implementation of this Alternative, the appropriate utilization standards will be applied to those areas.

The herbaceous riparian utilization standard measures the use of herbaceous vegetation away from the water's edge (in %) and measures the use of herbaceous vegetation at the water's edge in terms of height of remaining stubble (in inches). These herbaceous riparian standards are applied to each riparian site depending on the Ecological Condition identified and the grazing system proposed, as described later and displayed on FIGURES 2-29 and 2-30. The matrix to be used for site-specific application of the herbaceous riparian utilization standards is shown below:

UTILIZATION STANDARDS FOR HERBACEOUS RIPARIAN VEGETATION
(Max. % Herbaceous Utilization/Minimum Height of Stubble at Water Edge)

ECOLOGICAL CONDITION	PROPOSED GRAZING SYSTEM			
	Season-Long	Deferred	Rest Rotation	Early Season
Unsatisfactory/ Non-Functioning	0%/NA+	≤15%/6"+	≤25%/6"+	≤30%/6"+
Unsatisfactory/ Functioning at Risk	≤35%/6"+	≤35%/5"+	≤35%/5"+	≤35%/5"+
Unsatisfactory/Properly Functioning	≤35%/6"+	≤35%/5"+	≤40%/4"+	≤45%/4"+
Satisfactory/Properly Functioning/ Not in Desired Condition	≤40%/4"+	≤45%/4"+	≤50%/3"+	≤55%/3"+
Good/Properly * Functioning or At Desired Condition	≤40%/4"+	≤45%/4"+	≤50%/3"+	≤55%/3"+

(The symbol ≤ reads "is equal to or less than")
(The symbol + reads "or greater")

* On a case by case basis, where monitoring indicates that utilization levels should be adjusted for a particular year to exceed standards in order to meet Desired Conditions, this change may be authorized prior to the grazing season.

Implementation of these riparian utilization standards assumes that the proposed grazing system for each allotment is functioning as designed. All proposed actions integral to the proper functioning of the proposed grazing system will be in place no later than 5 years after the Decision Notice for this Project. If these integral actions have not been implemented within 5 years for a given allotment, the grazing system used to determine site-specific utilization standards for that allotment will revert to the grazing system that exists in the absence of implementation of those proposed actions. However, even prior to implementation of the proposed improvements, proposed grazing systems and utilization standards will be implemented.

The riparian utilization standard for woody species, such as willow, is not dependent on proposed grazing system, but is dependent on Ecological Condition. For riparian sites in Unsatisfactory Ecological Condition/Non-functioning, livestock use of woody browse is proposed at not to exceed 0 to 20% of current years growth, dependent on site-conditions. For riparian sites in all other Ecological Conditions, livestock use is proposed at not to exceed 20% of current years growth.

The riparian use standard for adverse annual streambank alteration by livestock is ≤20%. Adverse annual alteration is any alteration in the current year that would contribute to erosion or would retard the recovery of the riparian vegetation or stream morphology.

Aspen

Aspen communities are heterogeneous stands of aspen, often associated with more mesic sites. Scattered aspen trees are included as a hardwood component of Upland communities. Two standards are employed to manage livestock use in aspen vegetative communities: Utilization of herbaceous vegetation and utilization of woody species. The aspen herbaceous utilization standard measures the use of herbaceous vegetation within the aspen community and the aspen woody browse standard measures the use on the current years' growth, which includes seedlings and saplings.

For use in determination of aspen utilization standards in ***Appendix C***, the Ecological Condition rating has two parts, vegetative component and functioning condition. The vegetative component rating for aspen areas is determined using the descriptions in ***Appendix C***. Functioning conditions are described as properly functioning, functioning at risk, or non-functioning. The functioning condition rating is defined in ***Appendix C***. Both components are combined in ***Appendix C*** to determine Ecological Condition.

All aspen vegetative communities are judged to be in Satisfactory Ecological Condition/Functioning, except where specifically identified otherwise. Numerous aspen sites have been identified as being other than Satisfactory/Functioning. Where these sites have been identified, they have been discussed specifically by allotment in **Chapter 3**. If other such areas are discovered during implementation of this Alternative, the appropriate utilization standards will be applied.

The Aspen Utilization Standards are as follows:

Ecological Condition	Herbaceous Use Standard	Browse Use Standard
Unsatisfactory/Non-functioning	0-30%	0-20%
Unsatisfactory/Functioning at Risk	≤30%	≤20%
Satisfactory/Functioning	≤50%	≤20%

(The symbol ≤ reads "is equal to or less than")
(The symbol + reads "or greater")

Where ranges of use are indicated, the site conditions will determine actual number.

Seeps

For this Alternative, "Seeps" are underground water sources that come to the surface and disperse, and have no overland hydrologic continuity with a stream system. Seeps are characterized by boggy, saturated soils, and may or may not have associated wet or dry meadows. The management focus for seeps is on those seeps that exhibit mesic conditions throughout the growing season. These seeps have the greatest potential to provide unique habitats throughout the growing season. Management will also be focused on those seeps that have the highest potential to provide a wide diversity of floral species and/or to provide habitats for faunal or floral species of interest. Seeps in Unsatisfactory Ecological Condition or seeps that are Critical Areas (habitat for species of interest) will be assigned utilization standards based on ***Appendix C***. Seeps not identified as Unsatisfactory Ecological Condition or Critical Areas will be managed to the utilization standards of the surrounding Upland or Aspen vegetative community in which they are found. Known Critical Areas or areas of Unsatisfactory Ecological Condition have been discussed in **Chapter 3**.

Three standards are employed to manage livestock use in Seep vegetative communities: Utilization of herbaceous vegetation, stubble height and utilization of woody species. The seep herbaceous utilization standard measures the use of herbaceous vegetation within the Seep community, but outside the area of boggy soil and standing water. The stubble height standard measures the use of herbaceous vegetation within the area of boggy soil and standing water. The aspen woody browse standard measures the use on the current years' growth on hardwoods, such as willows.

For use in determination of Seep utilization standards in ***Appendix C***, the Ecological Condition rating has two parts, vegetative component and functioning condition. The vegetative component rating for seep areas is determined using the descriptions in ***Appendix C***. Functioning conditions are described as properly functioning, functioning at risk, or non-functioning. The functioning condition rating is defined in ***Appendix C***. Both components are combined in ***Appendix C*** to determine Ecological Condition.

The Seep Utilization Standards are as follows:

Ecological Condition	Herbaceous Use	Stubble Height	Browse Use
Unsatisfactory/Non-functioning	0-30%	≥6"	0-20%
Unsatisfactory/Functioning at Risk	30-40%	≥5	≤20%
Satisfactory/Functioning*	≤50%*	NA*	≤20%*

* Same as surrounding Uplands or Aspen (The symbol ≤ reads "is equal to or less than")
(The symbol + reads "or greater")
Where ranges of use are indicated, the site conditions will determine actual number.

VEGETATION TREATMENT

Mechanical treatments and/or prescribed burning are proposed for the purpose of moving vegetative communities towards their Desired Condition. Vegetation treatments are documented by allotment in **Chapter 3**. A discussion of the types of vegetation treatments, their purposes and methods will be provided here.

The **Stewardship Alternative** and the **No Grazing Alternative** propose treatments for aspen (*Populus tremuloides)*, meadows and four types of Upland vegetation: bitterbrush (*Purshia*

tridentata); western juniper (*Juniperous occidentalis*) woodlands; mountain mahogany (*Cercocarpus ledifolius*); and sagebrush (*Artemesia tridentata)*. Under the **Stewardship Alternative**, vegetation treatment areas which include burning other than pile burning, will require 2 years of rest from livestock grazing, after treatment.

Aspen

Proposed treatment of aspen communities is similar on all proposed sites, with minor variations. All of the aspen stands proposed for treatment have severe competition from white fir and in some places lodgepole pine. These proposed treatments are removal of coniferous trees less than 22" in diameter at 4.5 feet above the ground and burning, with fencing and soil tilling proposed on some areas. All but one of the aspen communities proposed for treatment are in Unsatisfactory/ Functioning at Risk Condition, while one (CC-9) is in Unsatisfactory/Non-functioning Condition. All proposed aspen treatment areas are "at Risk" or Nonfunctioning because of two past management practices. First, is the exclusion of natural fire. Natural fire historically removed coniferous competitors, thinned aspen stands, minimized the spread of disease and facilitated aspen regeneration. Conifers, particularly white fir, are able to dominate these mesic sites in the absence of fire, causing eventual exclusion of aspen. Second, past grazing management practices have not provided adequate protection from grazing effects, for aspen regeneration that does occur.

Removal of conifers is designed to increase the health and vigor of established aspen plants by reducing competition for light, water and soil nutrients. The objective of burning is to facilitate the survival of aspen regeneration through destruction of conifer seedlings, stimulation of aspen suckering and to reduce fire severity potential through fuels reduction. It is believed that the utilization standards for aspen proposed earlier will provide adequate protection for aspen regeneration. Where the proposed actions have been implemented, the resulting aspen stands will be considered to be in Satisfactory/Functioning Condition, except where fencing is also proposed. Those stands will be fenced to protect aspen regeneration where other methods of positive control are less effective. In one project (GC-5), tilling of soil to disturb aspen roots is proposed to facilitate aspen regeneration.

Bitterbrush

Bitterbrush is an important forage shrub for deer. Two projects are proposed for improvement of the health and vigor of bitterbrush communities. One (DC-12) is proposed in an area where junipers are beginning to dominate the site to the exclusion of the bitterbrush. On these xeric sites, juniper can out-compete bitterbrush for moisture. Historically, natural fire periodically removed juniper through destruction of seedlings and mature plants. Fire exclusion has allowed site domination by junipers. This site now contains junipers of all age classes and a fire ladder exists. Any fire without pre-treatment would result in mortality to existing bitterbrush. Therefore, project DC-12 proposes to pre-treat fuels by cutting down all juniper trees larger than 1 inch in diameter at the base, cutting limbs and tops off and scattering near the ground. If there is a market for the juniper tree boles, they will be removed, if not, then they will be left on the ground. This pre-treatment will create conditions for a low-intensity fire where only a few existing bitterbrush plants will be damaged, and the burning will reduce fire severity potential. The objective of burning after removal of larger junipers, is to facilitate the survival of bitterbrush regeneration through destruction of juniper seedlings, to reduce fire severity potential through reduction of the fuels created in removing the juniper.

The second bitterbrush project is BR-15. Most of the area within the Wilderness Sheep Allotments is within the South Warner Wilderness, but this project is located on a portion of the Wilderness Sheep Allotments that is not within the South Warner Wilderness. On this site, juniper is beginning to dominate the site to the exclusion of the bitterbrush and some over-mature mountain mahogany. Historically, natural fire periodically removed juniper through destruction of seedlings and mature plants, but fire exclusion has allowed site domination by juniper and some over-mature mountain mahogany that is out of the reach of deer for use as food. Any fire without pre-treatment would result in mortality to existing bitterbrush. Therefore, project BR-15 proposes to pre-treat fuels by cutting down all juniper trees and cutting limbs and tops off and scattering near the ground. This pre-treatment will create conditions for a low to moderate intensity fire where only a few existing bitterbrush plants will be damaged, and the burning will reduce fire severity potential. Every third mountain mahogany plant that is no longer providing forage value for deer because of its' over-mature condition, will have its main stem intentionally cut into to create damage that stimulates resprouting of tender shoots within reach of deer.

Juniper

Three projects are planned for the purpose of removing juniper trees to improve the grass and forb community on the proposed sites. All of these are located on lower elevation (5,000-6000 feet) sites. On these xeric sites, juniper can out-compete grasses, herb and forbs for site domination, and juniper trees inhibit growth of other plants beneath them. Historically, natural fire periodically removed juniper through destruction of seedlings and mature plants. Fire exclusion has allowed site domination by junipers. These sites now contain junipers of all age classes, but the juniper crowns are widely spaced, and the density and height of grasses and forbs is very low. Without pre-treatment, any controlled fire would not be likely to result in mortality to existing larger juniper. Therefore, projects CC-10 and WV-2 propose to pre-treat fuels by cutting down juniper trees over 1 inch in diameter at the base, cutting limbs and tops off and scattering near the ground. If there is a market for the juniper tree boles, they will be removed, if not, then they will be left on the ground. The objective of burning after removal of juniper trees, is to prepare the site for grasses and forbs to reseed the following year, and to reduce fire severity potential by reducing the fuels created by the removal. Juniper leave areas approximately ¼ to ½ acre in size will be left for habitat diversity. These leave areas will be placed where they best provide habitat diversity and spatial representation. Leave areas will cover approximately 2% of the total project size.

Project OU-5 proposes to allow naturally caused fire to play its historic role in the juniper-grass community where it is proposed. Appropriate fire suppression strategies would be used under prescribed conditions to achieve beneficial ecological effects from naturally caused fires. Prescribed natural fire would be allowed to burn grasses, forbs and junipers wherever it occurs. There is very little shrub component within this area. The boundaries of this area are natural, physical and ecological barriers to fire spread. This project encompasses the area of project WV-2 discussed earlier. In many cases, natural fire may have little to no spread, but in some areas it has the potential to cover large areas.

Meadows

In dense timber stands, meadows offer diversity of habitats. Project MC-2 proposes to reestablish as meadow, portions of meadows being invaded by dense stands of young-growth lodgepole pine and white pine. This area is located at nearly 8,000 feet in elevation. This area was heavily logged around the turn of the 20th century, and young-growth lodgepole and white pine stands are

aggressively invading these meadow sites. The trees consume tremendous amounts of water, drying up the soils underneath, and reducing the size of the meadows. The project would cut all coniferous trees for a distance of 200 feet from the current meadow edge, in order to enlarge the meadow size. If there is a market for the tree boles, they will be removed, if not, then they will be left on the ground. Tops and limbs will be cut off and scattered. The objective of post removal burning is to prepare the site for grasses and forbs to reseed the following year and to reduce fire severity potential by reducing the fuels created in removing the trees.

Mountain Mahogany

Mountain mahogany is a desirable forage plant for deer. However, when mountain mahogany becomes taller than can be reached by deer, it is no longer useable by deer. Project YJ-15 proposes to burn over-mature mahogany that is no longer useable by deer. Natural fire historically removed over-mature mountain mahogany and facilitated regeneration. The mahogany is mixed with juniper, ponderosa pine, white fir, grasses and forbs. The objective of burning after removal of larger conifers, is to facilitate the survival of mountain mahogany regeneration through destruction of conifer seedlings and to reduce fire severity potential through reduction of the fuels created in removing the trees. Where pine and fir species are mixed in, the trees have been thinned in recent timber sales, and mostly ponderosa pine (a more fire tolerant species) remains, creating a condition conducive to low to moderate intensity fire.

Sagebrush

Where big sagebrush occurs as a monoculture, it is usually very dense and decadent, and dominates the site to the partial exclusion of grasses and forbs. These sagebrush areas have high fire intensity and high rates of spread under high-wind conditions. The proposed big sagebrush treatment areas seem to have resulted from the exclusion of natural fire. Natural fire historically removed mature sagebrush, allowing regeneration of grasses and forbs. It is proposed to use prescribed fire to restore the historic vegetative community to these areas and reduce sagebrush canopy cover to between 20 and 50% to reduce fire severity potential. These low to moderate intensity fires in the late-summer or fall, result in irregular mosaic burns. Four of the proposed sagebrush burns are currently authorized under existing Environmental Analyses (MB-9, MB-10, DC-11 and BR-8).

Project MB-7 proposes to allow naturally caused fire to play its historic role in the sagebrush-grass community where it is proposed. Appropriate fire suppression strategies would be used under prescribed conditions to achieve beneficial ecological effects including reductions in plant density and canopy cover, and a balance distribution of age classes. Prescribed natural fire would be allowed to burn grasses, forbs and junipers wherever it occurs. The boundaries of this area are natural, physical and ecological barriers to fire spread. This project encompasses the area of project MB-9 discussed earlier.

Resting from grazing before treatment is not required. It is estimated that grazing to utilization standards under the Stewardship Alternative will leave sufficient herbaceous material to have a high probability of sustaining prescribed management ignited fire or naturally ignited wildland sagebrush burns at intensities sufficient to achieve rangeland and wilderness objectives.

Appendix C

ECOLOGICAL CONDITION DESCRIPTIONS

UPLAND CONDITION MATRIX

(Includes grasslands (``meadows" in decision protocol tables), shrublands, juniper woodlands; summer soil water table ≥125 cm)

01/18/00

Ecological Condition (Modoc FLRMP)	Functioning Condition/ Rangeland Rating	Components	Livestock Use Standards (Modoc FLRMP) **Herbaceous**	Livestock Use Standards (Modoc FLRMP) **Browse**
U n s a t i s f a c t o r y	**Nonfunctioning** *Very Poor; Poor-Modoc FLRMP *Low ecological condition rating	Herbaceous and shrub vegetation is sparse. Plants are pedestaled; "A" horizon absent; well-defined rills and gullies, bare areas and well-defined scours; large wind and water borne soil deposits behind rocks and vegetation. Plants clumped with large bare areas. Litter absent. Scattered perennial herbaceous plants are predominantly old, decadent. Annual forbs/grasses may be present.	0-30%	0-20%
S a t i s f a c t o r y	**Functioning At risk** *Fair- Modoc FLRMP *Moderate ecological condition rating	Mature plants only are pedestaled; "A" horizon present, but fragmented. Rills/gullies are small; not connected. Bare soil present, in patches. Some soil accumulations behind obstacles. Plant distribution fragmented. Litter is present, but associated with prominent plants and not widespread. Seedling/young plants may be missing. Annual forbs/grasses may be present.	30-40%	20%
	Proper Functioning Condition *Good to Excellent-Modoc FLRMP *High ecological condition rating	High cover/density of herbaceous perennials. Little or no pedestaling; "A" horizon present, unfragmented. Rills/gullies absent or inactive. Plants well distributed; litter uniform across the site. Age class distribution apparent in all species. Plants display normal growth form.	30-50%	20%

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Definitions:

Proper Functioning Condition:
Upland areas are in a properly functioning condition when they are dynamic and resilient to perturbations in structure, composition, and processes in their biological and physical components. Intervention or manipulation to maintain functional conditions is unnecessary or minimally needed.

Functioning- at risk:
Upland areas are functioning, but an existing environmental attribute or attributes makes them susceptible to degradation.

Nonfunctional:
Upland areas are not functioning when attributes of soils, nutrient cycles, succession, are not adequate to provide resiliency to perturbations on structure, composition, and processes in biological and physical components. (Adapted from National Research Council 1994; Assessment Team 1996)

Notes: Upland Matrix
Proper Functioning Condition definitions and protocols have not been developed. There are a few draft efforts that attempt to qualitatively assess upland conditions. One of these is the ``rapid assessment" technique and scorecards that are based on National Research Council, 1994. The premise of the attributes included in this assessment is that landscapes have readily observable indicators of the status of nutrient cycles, hydrologic cycles, energy flow, and recovery mechanisms. ``Healthy" landscapes can be distinguished from ``non-healthy" landscapes based on the general attributes, which at this scale, are not species or plant-community specific. A draft Proper Functioning Condition protocol and provisional checklist was developed in Region 4 for use in the Utah High Plateaus and Mountains ecological section (Assessment Team: Utah High Plateaus and Mountains Section, 1996). This checklist is adapted from the lotic and lentic riparian checklists currently in use in the Proper Functioning Condition protocols. The checklist was applied to broad vegetation types (e.g. ``Aspen forest") in the Utah High Plateau and Mountains section. The purpose for applying the checklist was to help differentiate and emphasize vegetation types that are at risk or nonfunctioning.

The Natural Resources Conservation Service is in the process of developing a checklist for rangeland health (USDA Natural Resources Conservation Service, 1987). The NRCS matrix has five categories of health, ranging from the most degraded to full expression of site biological potential. This matrix is in draft form as of December 30, 1997.

Ecological condition rating systems include, but are not limited to: frequency transects,etc. (USDA Forest Service 1997)

References: Upland Matrix

Assessment Team: Utah High Plateaus and Mountains Section. 1996. **DRAFT Proper functioning condition assessment: Utah High Plateaus and Mountains Section**. Ogden, Utah. 31 p.

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RIPARIAN (STREAMS AND SPRINGS) CONDITION MATRIX

(Includes streams, tributary springs and associated wet and dry meadows,)

01/18/00

Ecological Condition (Modoc FLRMP)	PFC Rating and indicators	Vegetation Components (description)	Example Indicator Species	Livestock Use Standards (cf. App. T. FLRMP) Herbaceous	Livestock Use Standards (cf. App. T. FLRMP) Browse	Livestock Use Standards (cf. App. T .FLRMP) Stubble height	Livestock Use Standards (cf. App. T. FLRMP) Streambank Alteration
Unsatisfactory	**Nonfunctioning:** * High width-depth ratio (exceed guidelines for stream type) * High H_20 Temps * Low sinuosity * High Sediment loads * Other PFC non-functioning indicators (lentic or lotic) *Very Poor/Poor, Modoc-FLRMP *Low ecological condition rating	* Little or no riparian woody vegetation, limited age/size classes present, where potential exists * Significant dry site shrub and/or tree component in greenline and meadows * Significant dry/grazed grass & forb component in meadows * Bare ground or exposed gravels may be significant in greenline	Dandelion, buttercup, *Potentilla*, douglas sedge, silver sagebrush, western juniper, big sagebrush, cheatgrass, medusahead, California False Hellebore, Kentucky bluegrass, coyote willow, rabbitbrush, *Dodecatheon*, Baltic rush, white fir, lodgepole, *Lotus* spp. Ponderosa/Jeffrey/Washoe Pines, etc.	0-30%	0-20%	≥6"	≤20%
	Functioning At Risk * w/d within guidelines for stream type (high end) * sediment loads within guidelines for stream type * H_20 temps within guidelines * headcuts/gullies are isolated * sinuosity w/in guidelines *vegetatative pfc components are not functioning *Fair, Modoc-FLRMP *Moderate ecological condition rating	* ≥1 riparian woody species where potential exists; monoculture, limited regeneration layer, mature/decadent age/size classes dominate, or limited size classes present: e.g. Lemmon Willow * Rhizomatous sedges may be present: usually Nebraska sedge or aquatic sedge * Predominance of sod-forming sedges and perennial grasses, some forbs/annual grasses can be present	Meadow barley, oatgrass, canary reedgrass, Nebraska sedge, few-flowered spikerush, aquatic sedge, Baltic rush, Lemmon willow, coyote willow, woods rose, aspen, cottonwood etc.	30-35%	20%	5"	20%
	Proper Functioning Condition, all attributes well within guidelines, except for vegetative PFC components *Fair/Good, Modoc-FLRMP *Moderate-High ecological condition rating	*Vegetative components as above *Wide disparity between Existing Condition and Desired Condition, usually in vegetative composition and structural components	Meadow barley, oatgrass, canary reedgrass, Nebraska sedge, few-flowered spikerush, aquatic sedge, Baltic rush, Lemmon willow, coyote willow, woods rose, aspen, cottonwood etc. Small populations of ``higher condition" sedges and other herbaceous vegetation may be present	30-45%	20%	5"	20%
Satisfactory	**Proper Functioning Condition,** all attributes well within guidelines, no headcuts or gullies or accelerated erosion *Good/Excellent, Modoc-FLRMP *High ecological condition rating	*A diversity of woody species size classes present where potential exists * Herbaceous component in associated meadow consists of sedges, perennial grasses, forb component low * Riparian woodies: diverse species composition (≥3 species)in the greenline of appropriate stream types (Rosgen A, B, C-1,2,3,4) * Minor dry site shrub & tree component at meadow edges; none in greenline * Herbaceous component dominated by densely rooted, water-loving sedges, perennial grass communities in the greenline. Little or no bare ground in greenline or meadow	Beaked sedge, wide-fruited sedge, Kellogg sedge, Nebraska sedge, aquatic sedge, Nevada rush, swordleaf sedge, small-fruited spikerush, Lemmon willow, Geyer willow, Booth willow, Eastwood willow, Bebb willow, Shining willow, yellow willow, cottonwood, aspen, red-osier dogwood, great basin wildrye, short-hair sedge etc.	40-55%	20%	4"	20%

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Definitions: (from USDI Bureau of Land Management 1995)

Proper Functioning Condition (Lotic areas):
Riparian-wetland areas are functioning properly when adequate vegetation, landform, or large woody debris is present to dissipate stream energy associated with high waterflows, thereby reducing erosion and improving water quality; filter sediment, capture bedload, and aid floodplain development; improve flood-water retention and ground-water recharge; develop root masses that stabilize streambanks against cutting action; develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; and support greater biodiversity. The functioning condition of riparian-wetland areas is a result of interaction amount geology, soil, water, and vegetation.

Functional-at risk (Lotic areas):
Riparian-wetland areas that are in functional condition but an existing soil, water, or vegetation attribute makes them susceptible to degradation.

Nonfunctional (Lotic areas)
Riparian-wetland areas that clearly are not providing adequate vegetation, landform, or large woody debris to dissipate stream energy associated with high flows and thus are not reducing erosion, improving water quality, etc., as listed above. The absence of certain physical attributes such as a floodplain where one should be are indicators of nonfunctioning conditions.

Notes: Riparian Matrix

Ecological condition rating systems include, but are not limited to: greenline transects, meadow cross section transects, woody species regeneration transects, frequency transects,etc. (USDA Forest Service 1997)

References: Riparian Matrix

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ASPEN CONDITION MATRIX
01/18/00

Ecological Condition	Functioning Condition	Components	Example Indicator species	Livestock Use Standards (FRLMP) **Herbaceous**	Livestock Use Standards (FRLMP) **Browse**
Unsatisfactory	**Nonfunctioning** *Very Poor: Poor-Modoc FLRMP *Low ecological condition rating	Aspen cover/density is sparse,Aspen canopy cover <40%; few aspen stems visible, hidden by conifers or sagebrush or *Veratrum.** Conifer understory and overstory cover>25%. Single age class=old; Dominant aspen trees >100 yrs, effective regeneration = 0. Aspen regeneration <500 stems/acre (5-15' tall) Numbers of logs on the ground exceed live stems. Oblique aspen canopy density="see through" (excluding conifers). Structure=single story. Dry site shrubs/forbs/conifers are prominent site components. Sagebrush cover>10% Soils/litter influenced by vegetation other than aspen. Note: clones in this condition are in danger of extinction within 30 years.	White fir, sagebrush, western juniper, California False Hellebore (*Veratrum*); lodgepole; yellow pines	0-30%	0-20%
	Functioning At Risk *Fair- Modoc FLRMP *Moderate ecological condition rating	Aspen cover/density is dominant. Aspen canopy cover <40%, Conifer understory and overstory cover>25%. Single age class=old. *Dominant aspen trees >100 yrs Effective regeneration =0. Aspen regeneration <500 stems/acre (5-15' tall) Structure=single story. Oblique aspen canopy density="see through" (excluding conifers). Soils/litter =aspen influenced. *Sagebrush cover>10%	Aspen in the overstory; white fir, lodgepole pine, juniper, sagebrush, yellow pines possible in the understory. Grasses and forbs include low value species such as Kentucky bluegrass, dandelion, *Potentilla*, *Veratrum*, buttercup, *Trifolium*, *Lotus*, etc.	30%	20%
Satisfactory	**Proper Functioning Condition** *Good to Excellent-Modoc FLRMP *High ecological condition rating	Aspen is dominant. Multiple age classes are present. Aspen in overstory, regeneration layers, unless the stand was recently regenerated and has at least one (young) age class. Oblique aspen canopy density="no see through" aspen. Soils/litter are aspen influenced w/ mollic epipedon.	Mesic shrubs may be present dep. on type, eg snowberry; rose; willows. Mesic forbs and graminoids depend on type; can include meadowrue, columbine, *Actea rubra*, various sedges and perennial grasses	30-50%	20%

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Definitions:

Proper Functioning Condition:

Aspen stands are in a properly functioning condition when they are dynamic and resilient to perturbations in structure, composition, and processes in their biological and physical components. Intervention or manipulation to maintain the clone is unnecessary or minimally needed.

Functioning- at risk:

Aspen stands are functioning, but an existing environmental attribute or attributes makes them susceptible to degradation. Intervention or manipulation (thinning conifers, fire, livestock management) is necessary to avoid serious problems with clone sustainability that will become almost irreversible in 20 years or so.

Nonfunctioning:
Processes that sustain stands in time and space such as successful regeneration; lack of mortality, etc. are clearly interrupted. Stands require immediate intervention in the form of cutting out conifers, fencing, etc. The clone is at risk of extinction in the next 0-20 years. (Adapted from Assessment Team 1996)

Notes: Aspen Matrix

``Proper Functioning Condition" for aspen stands has not been defined elsewhere.

Ecological condition rating systems includes, but are not limited to: frequency transects,etc. (USDA Forest Service 1997)

References: Aspen Matrix

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SEEP CONDITION MATRIX

(Includes seeps & bogs that do not flow overland into stream systems,)
and associated wet or dry meadows
01/18/00

Ecological Condition	Functioning Condition	Components		Example Indicator Species		Livestock Use Standards (cf. App. T, FLRMP)		
		Seeps	Wet or dry meadows	Seeps	Wet or dry meadows	Herbaceous	Browse	Stubble Height
Unsatisfactory	Nonfunctioning *Very Poor: Poor-Modoc FLRMP *Low ecological condition rating	Exposed soils and/or rocks, no ``sponge" effect from extensive vegetation roots; water surface exposed to solar radiation; excessive hummocking. Headcuts; active erosion may be present in livestock or recreation trails, actively or potentially draining the site. Shrubs are absent, or remnants consist of stumps or ``mushrooms".	* Little or no riparian woody vegetation, limited age/size classes present, where potential exists * Significant dry site tree and/or shrub component in meadows * Significant dry/grazed grass & forb component in meadows * Bare ground or exposed gravels may be significant in meadow	Forbs such as watercress, lotus, shooting star, clovers; algae species; moss; grasses=*Muhlenbergia*, other shallow-rooted species.	Dandelion, buttercup, *Potentilla*, douglas sedge, silver sagebrush, western juniper, big sagebrush, cheatgrass, medusahead, California False Hellebore, Kentucky bluegrass, coyote willow, rabbitbrush, *Dodecatheon*, Baltic rush, white fir, lodgepole, *Lotus* spp., Ponderosa/Jeffrey/Washoe Pines, etc.	0-30%	0-20%	≥6"
Satisfactory	**Functioning At Risk** *Fair- Modoc FLRMP *Moderate ecological condition rating	Frost-heaving or hummocking may be present. Shrub remnants consist of stumps or ``mushrooms". Combination of moist site (hummock tops) and wet site (hummock swales) species. Hydrophytic shrubs ≤1; evidence of heavy browsing	* ≥1 riparian woody species where potential exists; monoculture, limited regeneration layer, mature/decadent age/size classes dominate, or limited size classes exist; e.g. Lemmon Willow * Rhizomatous sedges may be present; usually Nebraska sedge or aquatic sedge * Predominance of sod-forming sedges and perennial grasses, some forbs/annual grasses can be present	Forbs such as watercress, lotus, shooting star, clovers; Kentucky Bluegrass, Baltic rush, aquatic sedge, Nebraska sedge, small-beaked sedge, etc. Geyer willow; Eastwood willow may be present	Meadow barley, oatgrass, canary reedgrass, Nebraska sedge, few-flowered spikerush, aquatic sedge, Baltic rush, Lemmon willow, coyote willow, woods rose, aspen, cottonwood etc.	30-40%	≤20%	≥5"
Satisfactory	**Proper Functioning Condition** *Good to Excellent-Modoc FLRMP *High ecological condition rating	Continuous vegetative mat composed of rhizomatous graminoids (sedges); diversity of hydrophytic shrubs (≥2 species); extensive root masses from perennial sedges provide ``sponge" or ``trampoline" effect; no hummocking, no erosion. Shrub form=available, little or no hedging; age classes of riparian woody veg are present	*A diversity of woody species & size classes present where potential exists * Herbaceous component in associated meadow consists of sedges, perennial grasses, forb component low * Riparian woodies: diverse species composition (≥3 species)in the meadow. * Herbaceous component in meadow is dominated by densely rooted, perennial graminoids. Little or no bare ground.	Bog birch, Eastwood willow, Geyer willow; *Kalmia polifolia*; aquatic sedge, Nebraska sedge, *Carex angustata, Carex jonesii*, etc.	Beaked sedge, wide-fruited sedge, Kellogg sedge, Nebraska sedge, aquatic sedge, Nevada rush, swordleaf sedge, small-fruited spikerush, Lemmon willow, Geyer willow, Booth willow, Eastwood willow, Bebb willow, Shining willow, yellow willow, cottonwood, aspen, red-osier dogwood, great basin wildrye, short-hair sedge etc.	40-50%	≤20%	≥4"

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Definitions:
Proper Functioning Condition, seeps, and associated wet or dry meadows:
Seeps and associated wet or dry meadows are functioning properly when adequate vegetation, landform, or debris is present to:

- filter sediment
- encourage water retention and ground-water recharge;
- develop root masses that resist cutting action including trampling, and resist headcut formation;
- provide desired habitat characteristics for terrestial and aquatic organisms; and
- support greater biodiversity

Functioning-at risk:
Seeps and associated wet or dry meadows are in functional condition but an existing soil, water, or vegetation attribute makes them susceptible to degradation.

Nonfunctioning:
Seeps and associated wet or dry meadows clearly are not providing adequate vegetation and landform to dissipate energy associated with wind action and overland flow from adjacent sites, and thus are not reducing erosion, improving water quality, etc., as listed above (USDI Bureau of Land Management 1994, USDI Bureau of Land Management 1999).

Notes: Seep Matrix

This matrix paraphrases portions applicable to seeps and associated wet or dry meadows from the Lentic Proper Functioning condition protocol (USDI Bureau of Land Management 1994); other information in the matrix is based on local knowledge. The lentic Proper Functioning Condition definitions and checklist do not emphasize vegetation diversity enough in our opinion, which is why this matrix is more explicit with regard to vegetation.

Ecological condition rating systems include, but are not limited to: meadow cross section transects, woody species regeneration transects, frequency transects,etc. (USDA Forest Service 1997).

References: Seep Matrix

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Appendix D

MONITORING PLAN
STEWARDSHIP ALTERNATIVE
WARNER MOUNTAIN RANGELAND PROJECT

INTRODUCTION

There are two types of monitoring, Annual (Implementation) Monitoring and Long-Term (Effectiveness) Monitoring. Annual monitoring is the monitoring of implementation of the Term Grazing Permit, including compliance with the Annual Operating Plan/Instructions. This includes, but is not limited to: pre-season range readiness and improvement maintenance, grazing season utilization as prescribed by Allotment or pasture (scheduled), or in response to internal or external complaints or concerns (unscheduled). Long-term monitoring is monitoring of changes in progress from the Existing Condition towards the Desired Condition in response to changes in livestock management and other structural and/or nonstructural improvements employed as prescribed management practices. This plan outlines the objectives, methods and procedures for each type of monitoring.

The following plan describes several opportunities for Permittees and other interested parties to cooperate in accomplishment of this plan. Reasonable advanced scheduling will be required to coordinate times and dates for all interested parties to monitor together.

ANNUAL (IMPLEMENTATION) MONITORING

As described earlier, implementation monitoring can be either scheduled or unscheduled. Scheduled implementation monitoring is carefully planned to display implementation levels in areas where management interest is focused.

SCHEDULED IMPLEMENTATION MONITORING

A. OBJECTIVES (WHY DO WE MONITOR)

- To determine compliance with the Term Grazing Permit and the Annual Operating Plan/Instructions.

- To evaluate the implementation of management practices to insure movement from the Existing Condition towards the achievement of Desired Condition, and use Adaptive Management to adjust livestock management strategies as necessary to meet Desired Conditions.

- To demonstrate to all interested parties and partners that implementation of the Allotment Management Plans is effective in achieving multiple use management and is sound resource management of Forest Service lands.

B. AREAS TO BE MONITORED (WHERE)

Implementation of utilization standards monitoring will occur on identified *key areas. Key areas* will be agreed upon annually by the Permittees and the Forest Service, incorporating information provided by any other interested parties and identified in the Annual Operating Plan/Instructions. These designations will be field validated by the same parties to assure that the *key areas* are capable of achieving the Desired Condition for the Ecological Community (Streams and Springs, Seeps, Aspen, Uplands) in which it is located. *Key areas* are areas where implementation of prescribed practices are crucial to long-term attainment of Desired Conditions agreed upon for each of the four Ecological Communities. These *key areas* may also be areas where the Permittee has had difficulty in meeting utilization standards in previous years. Areas where resource issues other than Ecological Condition are of prime importance are Critical Areas. Critical Areas may also be designated as *key areas*. Generally, *key areas* will be constant. Changes will be agreed upon by the Permittee and Forest Service, incorporating information from other interested parties. *Key areas* are site-specific to each Allotment and/or pasture identified in a grazing system.

Monetary and workforce considerations preclude establishing *key areas* to monitor all possible combinations of conditions.

C. TIMING OF MONITORING (WHEN)

1. Pre-season monitoring will consist of:
   - determination of range readiness (i.e. plant phenology and soil moisture);
   - determination of current use levels by wildlife;
   - inspecting fence conditions; and
   - any other check/s as may be required by the Permit.

Pre-season monitoring of range readiness usually does not occur on *key areas,* but may occur on sites that may be representative of several allotments.

2. Monitoring during grazing will occur on *key areas*. This monitoring will evaluate:
   - *% herbaceous use and browse use* in all Ecological Communities (Uplands, Streams and Springs, Aspen and Seeps);
   - *stubble-height* in Streams and Springs and Seep Communities; and
   - *streambank alteration* will be monitored in the Streams and Springs communities.

3. Post-grazing monitoring will occur on *key areas*. This monitoring will evaluate:
   - *% herbaceous use and browse use* in all Ecological Communities (Uplands, Streams and Springs, Aspen and Seeps);
   - *stubble-height* in Streams and Springs and Seep Communities; and
   - *streambank alteration* will be monitored in the Streams and Springs communities.

   Post-grazing monitoring should be completed within 10 days of completion of grazing within a deferred pasture or on an Allotment at the end of the grazing season to document livestock use levels. If not, document the number of days after the completion of the grazing.

4. To better understand the interaction and to document the competition between livestock and wildlife for forage, it is desirable to monitor *key areas* for wildlife use levels prior to livestock use and again after the end of the livestock use period. Monitoring of current use levels by wildlife will be made in areas where there is concern over competing uses, if different than the specified *key areas.*

D. RESPONSIBILITY FOR MONITORING (WHO and HOW MANY)

The Forest Service will be responsible for pre-season monitoring.

Monitoring during grazing will primarily be the responsibility of the Permittee. The Forest Service or other interested parties may also conduct monitoring during grazing. The primary benefit of monitoring during grazing is to provide the Permittee with information needed to determine when to move livestock from one area to another (i.e. when utilization standards are close to being met).

Post grazing monitoring will be conducted on *key areas* cooperatively by the Permittee, any other interested parties and the Forest Service. The number of *key areas* to be monitored varies widely by Allotment. In the interest of achieving the largest, most credible monitoring sample possible with the least expenditure of dollars and time, it is recommended that the Permittee, other interested parties and the Forest Service share the monitoring. However, upon Permittee request, all post-grazing monitoring will be completed together. A smaller sample size would result due to time and money constraints.

Permittees are encouraged to establish permanent photo points at *key areas.* Cameras with date stamps are very useful. Digital cameras could be downloaded onto Forest Service computers for permanent record keeping at no cost to the Permittee beyond the purchase cost of the camera. Standard photos can also be scanned for permanent recording.

E. METHODOLOGY (HOW)

Following is a description of the proposed process that would increase sampling size and confidence in results, where cooperative monitoring occurs.

Individual measurements of % utilization should be within a 10% range of each other (e.g. three measurements taken on the same key area with values of 32%, 37% and 41%. They are all within 10% of each other). The average of those three measurements is taken as the valid measurement for that key area. In an instance where measurements result in values of 32%, 37%, and 44%, for example, the two closest values would be considered the valid measurements for that key area.

If at least 2/3 of an individual's measurements taken in common with the Forest Service, (i.e. same key area by different individuals either at the same time or within a reasonable time of each other so that measurements are comparable), fall within the 10% range of each other,

then the measurements taken by that individual on other key areas can be added to the sample set as valid measurements.

The number of key areas will be determined by factors associated with each allotment. To be eligible to be pooled in a data set, each individual must measure at least 20% of the total key areas available in that allotment. Selection of key areas monitored will be done randomly, after grazing is completed.

Specific description of methodologies for measuring utilization of herbaceous and browse are well described in the Interagency Range Analysis Handbook and the Region 5 Range Administration Handbook.

Brief descriptions of some of the methods most commonly used on the Modoc National Forest are given below.

1. Range Readiness
   Range readiness is based on plant phenology and soil conditions. Rangeland is generally ready for grazing when the soil has become firm after winter and early spring precipitation, and when key plants have reached the defined stage of growth, as identified in the Forest Service Range Environmental Analysis Handbook.

2. Landscape Appearance, Herbaceous
   Within areas identified as *key areas*, the Landscape Appearance, Herbaceous method will be employed. Within a representative portion of the *key area*, a hoop (approximately 1 foot in diameter) is randomly tossed onto the ground far enough away so as to deter any biasing of the hoop landing location. The observer then estimates the utilization level within the hoop. This level of utilization is recorded on a data sheet (see Appendix A). The data sheet displays utilization by categories, with written descriptions of the categories to help the observer make estimates.

   The hoop toss method is repeated in a *key area* for a minimum of about 30 repetitions or until a majority of the utilization levels recorded group in one category. All groups are added and averaged.

   Herbaceous plant species to be considered in the hoop toss method will be agreed to by Permittee and Forest Service when *key areas* are selected. Appendix B is a plant species list defining high and low value herbaceous species. When a *key area is selected,* this list will be consulted to determine which plants are desirable and which are not.

3. Stubble-height and Streambank Alteration
   A 100 ft. tape measure is laid on the stream bank. At each 1-ft. interval, the observer measures stubble-height and asks the following two questions :
   1. Is there streambank alteration caused by livestock that will cause active erosion? or
   2. Is there streambank alteration caused by livestock that will retard recovery of the stream?

   If the answer to either question is yes, then that 1 foot of streambank is altered. If the answer to both questions is no, then the streambank is not altered for that 1 foot section. The tape measure is laid on the other side of the stream, and the same procedure is

repeated on the opposite streambank. The 200 values for stubble-height are averaged. and the number of 1-foot sections where the answer to either question was yes, is divided by 200 to derive the % altered.

Placement of the transect within a *key area* should not be in an area of streambank that is noticeably more or less altered than the average for the area.

Stubble-height is measured for all plant species.

4. Landscape Appearance. Browse

For selected *key areas,* the Landscape Appearance, Browse method will be used will be estimated. A data sheet (see Appendix C) will be used to record estimates. The data sheet also contains written descriptions of use categories to help the observer make estimates. Shrub plants to be sampled can be selected by any random method that does not bias sampling based on knowledge of the browsed condition of the plant. The closest plant to a tossed ring or the closest plant to a given distance on a transect line or all plants within a given distance of a transect line are all commonly used techniques. When the shrub plant is chosen, then all twigs within the expected browse height for the class of livestock being monitored are examined. The % browsed is the number of twigs with browse evidence divided by the total number of twigs on the plant within the expected browse height.

The browse estimate is repeated in a *key area* for a minimum of about 30 plants or until a majority of the utilization levels recorded are in one category. The category in which the majority of plots are recorded, is the use category for that measurement area.

Shrub plant species to be considered in the browse use monitoring will be agreed to by Permittee and Forest Service when key areas are selected. Appendix D is a plant species list defining high and low value shrub species. When a *key area* is selected this list will be consulted to determine if plant species are desirable or undesirable.

UNSCHEDULED IMPLEMENTATION MONITORING

WHEN, WHERE, WHY AND WHO

Unscheduled implementation monitoring is unplanned and usually occurs as a by-product of involvement in another activity in the vicinity. The most common unscheduled monitoring is a casual observation from a passing vehicle. Another method of unscheduled monitoring may be short walks off the road when the observation from a passing vehicle indicates a need to investigate more closely. Both of these unscheduled monitoring methods are used by Forest Service employees, Permittees and other interested parties. When implemented by Forest Service employees, it usually occurs during the conduct of other normal business, and it is therefore not possible to notify each Permittee in advance of its' occurrence. Permittees and interested parties conduct unscheduled monitoring when appropriate for them, and do not usually notify the Forest Service in advance. Unscheduled monitoring may occur outside of *key areas.*

PROCEDURES

A. If unscheduled monitoring identifies that Allotment conditions appear to be in compliance with the terms of the Permit, the Forest Service will document such with a short note to be placed in the Allotment file; **or**

B. If unscheduled monitoring identifies Allotment conditions that may not be in compliance with the terms of the Permit, the Forest Service will:

- Verify the location and nature of the unscheduled monitoring results, but will not place documentation in the Permit file until the following procedures have been employed;
- The Forest Service will notify the Permittee of all known information, and request any additional information from the Permittee;
- The Forest Service and the Permittee will attempt to resolve the issue without a field visit;
- If a ground visit is required, the Forest Service will coordinate an on-the-ground visit with the Permittee and any interested parties if they wish to attend;
- The Permittee and the Forest Service will agree to a desired condition within the capability of the site, and will agree to a solution to achieve that desired condition. Any agreements reached by Permittee and Forest Service will incorporate information provided by interested parties. Agreement will be in writing and will be signed in the field;
- Upon request, any interested parties not present at the on-the-ground meeting, will be notified of the results of the meeting; and

UNSCHEDULED IMPLEMENTATION MONITORING OF COMPETITION BY ELK AND LIVESTOCK FOR FORAGE

WHEN, WHERE, WHY AND WHO

Pre- and postlivestock use monitoring will be conducted within key elk concentration areas. Specific parameters to be measured include: herbaceous and woody forage utilization, stubble height and streambank alteration. Monitoring results will be documented in the end-of-season monitoring report and reported to interested parties upon request. A potential elk/livestock conflict may be identified by a permittee, the Forest Service through pre- and post-season livestock use monitoring, or other interested parties.

PROCEDURES

If a potential elk/livestock use conflict is reported:

- The Forest Service will work in close consultation and coordination with the permittees, other agencies, and interested public, to first verify whether or not a problem exists.
- A field site visit will be scheduled. Interested parties will be invited to participate in the field site visit.
- Results of the field site visit will be documented and placed in the permit file. If the field site visit verifies that a problem does not exist, no further action is necessary.
- Should a problem be identified, the Forest Service will continue to work in close consultation with the interested parties to appropriately address and resolve the problem(s).
- Prior to implementing potentially expensive changes in livestock grazing management strategies or reducing seasons of livestock use or authorized AUMs, a wide variety of appropriate management options will be explored with the interested parties.
- Any decisions with potential to reduce existing livestock grazing use or result in potentially expensive management will be made only after full consultation and coordination with the permittee and interested public. An opportunity to appeal the decision will be provided in accordance with the appeals regulations.

LONG-TERM (EFFECTIVENESS) MONITORING

A. OBJECTIVES (WHY)

To evaluate the effectiveness of prescribed management practices in attainment of Desired Conditions, assuming that annual implementation monitoring reflects proper application of management practices prescribed. If properly implemented practices are not effective in achieving Desired Conditions, management practices will be changed as necessary to attain the Desired Conditions.

B. AREAS TO BE MONITORED (WHERE, HOW MANY and WHEN)

B*enchmarks* are areas where implementation of prescribed management practices are crucial to long-term attainment of Desired Conditions and are site-specific to each Allotment and/or pasture identified in a grazing system. *Benchmarks* will be agreed to by the Permittee and the Forest Service, incorporating information provided by any other interested parties. These designations will be field validated by the same parties to assure that the *benchmarks* are capable of achieving the Desired Condition for the Ecological Community (Streams and Springs, Seeps, Aspen, Uplands) in which it is located. *Benchmarks* selected for long-term monitoring should coincide where possible with *key areas* (Annual Implementation Monitoring), to increase the usefulness of the data.

Monetary and workforce considerations preclude establishing *benchmarks* to monitor all possible combinations of conditions. The number of *benchmarks* to be monitored may be as low as one per Allotment.

Benchmarks in Streams and Springs Ecological Communities will be monitored in three to five year intervals. This timing interval is consistent with local experience regarding expected rates of recovery on riparian areas. When improvements necessary to ensure positive control of livestock movement are in place and moderate levels of utilization are implemented, significant changes in channel morphology and riparian vegetation usually result in about three to four years. These changes include: narrowing and deepening of channels; appearance of water-loving, deep-rooted sedges; and changes in streambed substrate. Often, after about five years, it is necessary to make adjustments to continue progress towards achievement of the Desired Conditions. Long-term assessment of progress towards Desired Condition will be continuous. Long-term assessment will include a determination of site capability to achieve Desired Condition. Where possible, "relic" sites should be established to serve as control areas in the assessment of the site capability

Benchmarks in Seeps Ecological Communities will be monitored in three to five year intervals. When improvements necessary to ensure positive control of livestock movement are in place and moderate levels of utilization are implemented, significant changes in condition usually result in about three to four years. These changes include: continuous vegetative mat of sedges; diversity of hydrophytic shrubs; extensive root masses; no fresh hummocking affecting hydrological function or accelerated erosion

In Upland and Aspen Ecological Communities, *benchmarks* will be monitored every five years. However, because the capability for change is much slower in uplands, it may be longer before appreciable change will be experienced. Perceptible changes would be age-class distribution changes, species changes and changes in canopy cover and hiding cover.

C. RESPONSIBILITY FOR MONITORING (WHO)

Effectiveness monitoring will be conducted on *benchmarks* by the Forest Service, cooperatively with the Permittee and any other interested parties.

D. METHODOLOGY (HOW)

Following are descriptions of long-term monitoring techniques that are commonly used to measure *benchmarks* for various ecological communities. All of the listed techniques may or may not be used on any given *benchmark.* Techniques selected will be appropriate for a given *benchmark.* Once techniques are selected for a *benchmark,* they will remain constant for that *benchmark.*

A. Streams and Springs and Seeps Communities

Any of the following methods will be used to determine attainment of Desired Conditions:

* Permanent photo-points to record visible change in riparian vegetation and channel morphology;
* Water temperature stations to record daily high and diurnal fluctuation;
* Stream cross-section transects to record status and changes of stream morphology;
* Pebble count transects;
* "Winward Riparian Evaluation Techniques", which include the following
  Meadow cross-section transects;
  Greenline Transects; and
  Woody Species Regeneration transects;

*Frequency transects to monitor species composition in meadows and spring areas;
*Transects and/or ocular methods to evaluate hummocking in seeps and springs; and
*Evaluation of hiding cover where the site is capable, using cover boards.

B. Upland and Aspen Communities

* Permanent photo points and density and/or frequency plots are used to evaluate the following attributes to determine progress toward Desired Condition:
  Status of, and changes in vegetation composition;
  Vegetation size and density;
  Soil cover; and
  Vegetation age class distribution;
* Evaluation of hiding cover where the site is capable, using cover boards:
  In Aspen vegetative communities, adequate hiding cover is defined as covering 90% of a standing, adult deer from a view equal to or greater than 200 feet; and
  In Upland vegetative communities, adequate hiding cover is defined as covering 90% of a bedded, adult deer from a view equal to or greater than 150 feet.

TRAINING

A major assumption in the successful completion of this monitoring plan, is that Permittees and any other interested parties will complete portions of this Monitoring Plan. Previous discussion of sampling scenarios and acceptable error has raised the concepts of errors due to interpretation of instructions and errors due to personal technique. Common training of all parties involved is one method to reduce both types of errors. The University of California/Modoc County Farm Advisor and the Modoc National Forest have previously cooperated in training of this type, and are committed to continuance of this cooperation in the future. It is the intent of these two cooperators to provide periodic training as the need is indicated by the interested parties. This training will enhance consistency of application of methods.

MONITORING SCHEDULE

Annual (Implementation) Monitoring and Long-Term (Effectiveness) Monitoring have been discussed previously. In order to clearly display the relationships of these types of monitoring and to clearly define time frames and responsibilities, the following Tables will be included in each Allotment Management Plan.

TABLE 1

Schedule for Implementation Monitoring Activities[1]

Monitoring Item	Method	Measurement Frequency	Who Responsible
Range Readiness	R5 Range Readiness procedures.	Annually, pre-season as needed.	FS
Livestock Use (Streams and Springs & Uplands)	Ocular estimates or paired clipped plots.	Annually	FS, Permittee and other interested parties
Residual Riparian Vegetation	Stubble Height	Annually	FS, Permittee and other interested parties
Streambank Stability	Streambank alteration	Annually	FS, Permittee and other interested parties
Browse Use, (Livestock and Wildlife)		Annually	FS, Permittee and other interested parties

1/ Monitoring of the activities specified in the EA/AMP.

TABLE 2

Schedule of Effectiveness Monitoring Activities[1]

Monitoring Item	Method	Measurement Frequency	Who Responsible
Streams and Springs Vegetation and Seep Trend	Photo-points, water temp, cross-sections, pebble count, Winward Riparian, Frequency transects, and transects or ocular methods to evaluate hummocking, cover board.	Every 3-5 years.	FS, Permittee and other interested parties
Upland Vegetation and Aspen Trend	Photo-points & frequency plots to evaluate changes in size, density, cover and age class distribution, cover board.	Every 5 years.	FS, Permittee and other interested parties

/ *Monitoring of the progress toward DFC's as defined in the EA and LRMP*

TABLE 3*

Benchmark Trend Study Areas

Streams and Springs	Seeps	Aspen Communities	Upland Communities
Identify by allotment	Identify by allotment	Identify by allotment	Identify by allotment

* *To be identified during completion of the AMP.*

MONITORING PLAN
Appendix A

QUALITATIVE ASSESSMENT - LANDSCAPE APPEARANCE HERBACEOUS UTILIZATION

KEY AREA:	DATE:	EXAMINER(S):
ALLOTMENT:		PASTURE:
KIND &/OR CLASS OF ANIMAL:		PERIOD OF USE:

CLASS INTERVAL	INTERVAL MIDPOINT (M)	DOT COUNT	# BY CLASS (C)	(M)x(C)	CLASS INTERVAL DESCRIPTION
0-5% **NO USE**	2.5				THE RANGELAND SHOWS NO EVIDENCE OF GRAZING OR NEGLIGIBLE USE.
6-20% **SLIGHT**	13				THE RANGELAND HAS THE APPEARANCE OF VERY LIGHT GRAZING. THE HERBACEOUS FORAGE PLANTS MAY BE TOPPED OR SLIGHTLY USED. CURRENT SEEDSTALKS & YOUNG PLANTS ARE LITTLE DISTURBED
21-40% **LIGHT**	30				THE RANGELAND MAY BE TOPPED. SKIMMED. OR GRAZED IN PATCHES. THE LOW VALUE HERBACEOUS PLANTS UNGRAZED & 60-80% OF THE NUMBER OF CURRENT SEEDSTALKS OF HERBACEOUS PLANTS REMAIN INTACT. MOST YOUNG PLANTS ARE UNDAMAGED.
41-60% **MODERATE**	50				THE RANGELAND APPEARS ENTIRELY COVERED AS UNIFORMLY AS NATURAL FEATURES & FACILITIES WILL ALLOW. 15-25% OF THE NUMBER OF CURRENT SEEDSTALKS OF HERBACEOUS SPECIES REMAIN INTACT. <10% OF LOW VALUE HERBACEOUS FORAGE PLANTS ARE UTILIZED. ** DOES NOT IMPLY PROPER USE.
61-80% **HEAVY**	70				THE RANGELAND HAS THE APPEARANCE OF COMPLETE SEARCH. HERBACEOUS SPECIES ARE ALMOST COMPLETELY UTILIZED, <10% OF THE CURRENT SEEDSTALKS REMAINING. SHOOTS OF RHIZOMATOUS GRASSES ARE MISSING. >10% OF LOW VALUE HERBACEOUS FORAGE PLANTS HAVE BEEN UTILIZED.
81-94% **SEVERE**	88				THE RANGELAND HAS A MOWN APPEARANCE & THERE ARE INDICATIONS OF REPEATED COVERAGE. HERBACEOUS FORAGE SPECIES ARE COMPLETELY UTILIZED. THE REMAINING STUBBLE OF PREFERRED GRASSES IS GRAZED TO THE SOIL SURFACE.
95-100% **EXTREME**	97.5				THE RANGELAND APPEARS TO HAVE BEEN COMPLETELY UTILIZED. >50% OF LOW VALUED HERBACEOUS PLANTS HAVE BEEN UTILIZED
	TOTALS Σ				NOTES: (USE OTHER SIDE IF NECESSARY)
AVERAGE UTILIZAT-ION	$\frac{\Sigma(MxC)}{\Sigma\,(C)}$	_____ =			

MONITORING PLAN
Appendix B

Herbaceous Plant List

High Value

Agropyron spicatum	bluebunch wheatgrass
Agropyron trachycaulum	slender wheatgrass
Agrostis stolonifera	redtop
Bromus carinatus	mountain brome
Carex spp.	Sedges
Danthonia californica	California oatgrass
Elymus cinereus	Great Basin wildrye
Festuca idahoensis	Idaho fescue
Hordeum brachyantherum	meadow barley
Muhlenbergia spp.	Muhly
Phleum spp.	Timothy
Poa canbyi	Canby bluegrass
Poa secunda	Sandberg bluegrass
Sitanion hystrix	bottlebrush squirreltail
Stipa columbiana	Columbia needlegrass
Stipa occidentalis	western needlegrass
Stipa thurberiana	Thurber's needlegrass

Low Value

Bromus tectorum	cheatgrass
Juncus balticus	Baltic rush
Juncus spp.	Wiregrass
Poa pratensis	Kentucky bluegrass
Potentilla spp.	Potentilla
Taraxicum officinale	dandelion
Taeniatherum caput-medusae	medusahead
Veratrum californicum	California false-hellebore

QUALITATIVE ASSESSMENT - LANDSCAPE APPEARANCE
BROWSE UTILIZATION

KEY AREA:	DATE:	EXAMINER(S):
ALLOTMENT:		PASTURE:
KIND &/OR CLASS OF ANIMAL:		PERIOD OF USE:

CLASS INTERVAL	INTERVAL MIDPOINT (M)	DOT COUNT	# BY CLASS (C)	(M)x(C)	CLASS INTERVAL DISCRIPTION
0-5% **NO USE**	2.5				BROWSE PLANTS SHOW NO EVIDENCE OF USE OR NEGLIGIBLE USE.
6-20% **SLIGHT**	13				BROWSE PLANTS HAVE THE APPEARANCE OF VERY LIGHT USE. AVAILABLE LEADERS OF BROWSE ARE LITTLE DISTURBED
21-40% **LIGHT**	30				THERE IS OBVIOUS EVIDENCE OF LEADER USE. THE AVAILABLE LEADERS APPEAR CROPPED OR BROWSED IN PATCHES & 60-80% OF THE AVAILABLE LEADER GROWTH OF BROWSE PLANTS REMAIN INTACT.
41-60% **MODERATE**	50				BROWSE PLANTS APPEAR RATHER UNIFORMLY UTILIZED & 40-60% OF THE AVAILABLE LEADER GROWTH OF BROWSE PLANTS REMAIN INTACT.
61-80% **HEAVY**	70				THE USE OF BROWSE HAS THE APPEARANCE OF COMPLETE SEARCH. THE PREFERRED BROWSE PLANTS ARE HEDGED & SOME PLANTS CLUMPS MAY BE SLIGHTLY BROKEN. NEARLY ALL AVAILABLE LEADERS ARE USED & FEW TERMINAL BUDS REMAIN ON BROWSE PLANTS. 20-40% OF THE AVAILABLE LEADER GROWTH OF BROWSE PLANTS REMAIN INTACT.
81-94% **SEVERE**	88				THERE ARE INDICATIONS OF REPEATED COVERAGE. THERE IS NO EVIDENCE OF TERMINAL BUDS & USUALLY <20% OF AVAILABLE LEADER GROWTH ON BROWSE PLANTS REMAINS INTACT. SOME PATCHES OF SECOND & THIRD YEARS GROWTH MAY BE GRAZED. HEDGING IS READILY APPARENT & THE BROSE PLANTS ARE MORE FREQUENTLY BROKEN. REPEATED USE AT THIS LEVEL PRODUCE A DEFINITELY HEDGED OR ARMORED GROWTH FORM..
95-100% **EXTREME**	97.5				<5% OF AVAILABLE LEADER GROWTH ON BROWSE PLANTS REMAINS INTACT. SOME. & OFTEN MUCH. OF THE ACCESSIBLE SECOND & THIRD YEARS GROWTH OF BROWSE PLANTS HAS BEEN UTILIZED. ALL BROWSE PLANTS HAVE MAJOR PORTIONS BROKEN.
	TOTALS Σ				NOTES: (USE OTHER SIDE IF NECESSARY)
AVERAGE UTILIZAT-ION	$\frac{\Sigma(MxC)}{\Sigma(C)}$	_____ =			

Shrub Plant List

High Value

Amelanchier alnifolia	serviceberry
Cercocarpus ledifolius	curl-leaf mountain mahogany
Populus tremuloides	aspen
Populus spp.	cottonwood
Purshia tridentata	antelope bitterbrush
Salix bebbiana	Bebb willow
Salix boothii	Booth willow
Salix geyeriana	Geyer willow
Salix lemmonii	Lemmon's willow
Symphoricarpos oreophilus	mountain snowberry

Low Value

Artemisia cana	silver sagebrush
Artemisia tridentata	big sagebrush
Chrysothamnus nauseosus	rabbitbrush
Juniperus occidentalis	western juniper
Rosa woodsii	rose
Salix exigua	coyote willow

Appendix E

IMPLEMENTATION SCHEDULES

STEWARDSHIP ALTERNATIVE

All actions included in the **Stewardship Alternative** requiring investment of dollars are assigned one of the following priorities;

1st priority - Improvements that are integral to the proper functioning of proposed grazing systems have first priority for available funding. The first priority proposed actions will be prioritized between all allotments and scheduled for implementation;

2nd priority - Improvements that are not integral to proper functioning of proposed grazing systems, but which improve the efficiency of operation for either the grazing permittee or the Forest Service, have second priority for available funding.

Proposed improvements can be funded by fee credit, appropriated funds, cooperative funds, partnership funds grants or by the grazing permittee.

Implementation of all 1st priority actions are proposed for Forest Service Fiscal Years 2000 through 2002. Implementation of 2nd priority actions are proposed for Fiscal Years 2002 through 2004. Actual implementation is dependent on annual Forest Service appropriations.

On the following pages is the proposed **Stewardship Alternative Implementation Schedule.**

NO GRAZING ALTERNATIVE

All vegetation restoration treatments, and the two fence removal projects included in the **No Grazing Alternative,** would be on the same implementation schedule as shown on the **Stewardship Alternative Implementation Schedule.**

CURRENT MANAGEMENT ALTERNATIVE

All projects that are included in the **Current Management Alternative** would be on the same implementation schedule as shown on the **Stewardship Alternative Implementation Schedule**.

On the following pages is the proposed **Stewardship Alternative Implementation Schedule**.

STEWARDSHIP ALTERNATIVE
IMPLEMENTATION SCHEDULE

Allotment	ID #	Name of Project	Type of Project	Priority	Acres	Cost-M$	Permittee share M$	FS Share M$
FY 2000			**PRIORITY 1**					
Mt Bidwell	MB 1	12-Mile Stock Pond	Water Development (1 ea.)	1	1	2	1	1
Mt. Bidwell	MB 11	Stateline Fence Reconstruction	Fence Reconstruction (4 mi.)	1	20	18	9	9
			FY 2000 ALLOTMENT TOTAL (Priority 1)		**21**	**20**	**10**	**10**
Davis Creek	DC 4	S. Fk. Davis Creek Rehab.	Contour Rehabilitation (2 sites)	1	2	2	0	2
Davis Creek	DC 7	Plum Valley Creek Rehab.	Contour Rehab. (1 site)/Culvert Removal (1)	1	1	1	0	1
			FY 2000 ALLOTMENT TOTAL (Priority 1)		**3**	**3**	**0**	**3**
FY 2001			**PRIORITY 1**					
Bald Mountain	BM 10	Lake City Holding Field	Fence Construction (0.75 mi.)	1	20	4	2	2
			FY 2001 ALLOTMENT TOTAL (Priority 1)		**20**	**4**	**2**	**2**
Bear Camp	BLC 14	Boundary Fence Reconstruction	Fence Reconstruction (2.9 MI.)	1	9	14	7	7
			FY 2001 ALLOTMENT TOTAL (Priority 1)		**9**	**14**	**7**	**7**
Blue Lake Cattle	BLC 12	Parsnip Springs Fence Relocation/Water	Fence Construction (0.5 mi.)/Water Development (1)	1	5	4.5	2.25	2.25
Blue Lake Cattle	BLC 14	Boundary Fence Reconstruction	Fence Reconstruction (3.5 mi.)	1	9	18	9	9
Blue Lake Cattle	BLC 18	Blue Lake Ranch Ditch Maintenance	Ditch Maintenance (Mechanical - 1.5 mi.))	1	10	1	0.5	0.5
			FY 2001 ALLOTMENT TOTAL (Priority 1)		**24**	**23.5**	**11.75**	**11.75**
Buck Creek	BC 1	Buck Creek Riparian/Boundary Fence	Fence Construction (0.75 mi.)	1	5	4	2	2
			FY 2001 ALLOTMENT TOTAL (Priority 1)		**5**	**4**	**2**	**2**
Cedar Canyon	CC9	Aspen Treatments/Fence	Conifer Removal & Burn (40 ac.)/Fence Const. (1.5 mi.)	1	40	22	3.75	18.25
			FY 2001 ALLOTMENT TOTAL (Priority 1)		**40**	**22**	**3.75**	**18.25**
Coyote	BLC 14	Boundary Fence Reconstruction	Fence Reconstruction (0.6 MI.)	1	2	2.5	1.25	1.25
			FY 2001 ALLOTMENT TOTAL (Priority 1)		**2**	**2.5**	**1.25**	**1.25**
Davis Creek	DC 1	Obsidian Meadow Rehabilitation	Water Development (1)/Construct Fence	1	10	7	3.5	3.5
Davis Creek	LC 8a	Lassen/Davis Boundary Fence Maint.	Heavy Fence Maintenance (.25 mi.)	1	3	1	0.5	0.5
Davis Creek	LC 8b	Lassen/Davis Boundary Fence Maint.	Fence Construction (.25 mi.)	1	3	3.5	1.75	1.75
			FY 2001 ALLOTMENT TOTAL (Priority 1)		**16**	**11.5**	**5.25**	**5.25**
Fandango	BC 1	Buck Creek Riparian/Boundary Fence	Fence Construction (0.75 mi.)	1	5	4	2	2
Fandango	F/LC1	Reconstruct Plantation Boundary Fence	Fence Reconstruction (0.5 mi.)	1	3	2.5	1.25	1.25
			FY 2001 ALLOTMENT TOTAL (Priority 1)		**8**	**6.5**	**3.25**	**3.25**
Granger Canyon	GC 7	Drift Fence/Cattleguard (Hansen)	Fence Construction (0.5 mi.)/Cattleguard (1)	1	5	9.5	4.75	4.75
			FY 2001 ALLOTMENT TOTAL (Priority 1)		**5**	**9.5**	**4.75**	**4.75**
Lassen Creek	F/LC1	Reconstruct Plantation Boundary Fence	Fence Reconstruction (0.5 mi.)	1	3	2.5	1.25	1.25
Lassen Creek	LC 8a	Lassen/Davis Boundary Fence Maint.	Heavy Fence Maintenance (.25 mi.)	1	3	1	0.5	0.5
Lassen Creek	LC 8b	Lassen/Davis Boundary Fence Maint.	Fence Construction (.25 mi.)	1	3	3.5	1.75	1.75
			FY 2001 ALLOTMENT TOTAL (Priority 1)		**9**	**7**	**3.5**	**3.5**

STEWARDSHIP ALTERNATIVE
IMPLEMENTATION SCHEDULE

Allotment	ID #	Name of Project	Type of Project	Priority	Acres	Cost-M$	Permittee share M$	FS Share M$
Mt. Bidwell	MB 9	12-Mile Rx Burn	Rx Burn	1	81	20	0	20
			FY 2001 ALLOTMENT TOTAL (Priority 1)		**81**	**20**	**0**	**20**
Outlet	OU 4	Blue Lake Rd. Cattleguard	Cattleguard Installation (1)	1	0.5	7	3.5	3.5
			FY 2001 ALLOTMENT TOTAL (Priority 1)		**0.5**	**7**	**3.5**	**3.5**
Selic	BR 8	Bdk Mountain Sagebrush Burn	Rx Burn	1	152	32	0	32
			FY 2001 ALLOTMENT TOTAL (Priority 1)	1	152	**32**	**0**	**32**
West Valley	WV 5	N. Boundary Cattleguard Reconstruction	Cattleguard Installation (RepairBase) (1)	1	0.5	4	2	2
			FY 2001 ALLOTMENT TOTAL (Priority 1)		**0.5**	**4**	**2**	**2**
Yankee Jim	YJ 11	N. Fk. Pine Creek Ridge Fence	Fence Construction (0.75 mi.)	1	5	4	2	2
Yankee Jim	YJ 14	Fitzhugh Guard Station Stock Pond	Water Development (1)	1	0.5	2	1	1
Yankee Jim	YJ 17	Bowman Ranch Stock Pond	Water Development (1)	1	0.5	2	1	1
			FY 2001 ALLOTMENT TOTAL (Priority 1)		**6**	**8**	**4**	**4**
FY 2002			**PRIORITY 1**					
Bald Mountain	BM 3	Franklin Fence Construction	Fence Construction (3 mi)	1	20	15	7.5	7.5
Bald Mountain	BM13/DC14	Bald/Davis Boundary Fence (east)	Fence Construction (0.5 mi.)	1	3	6	3	3
Bald Mountain	BM14/DC15	Plum Valley Boundary Fence/Cattleguard	Fence Construction (0.5 mi.)/Cattleguard (1/2)	1	3	2.5	1.25	1.25
Bald Mountain	BM14a	Pine Canyon Gap Fences (3)	Fence Construction (0.25 mi.)	1	2	1.25	0.62	0.63
			FY 2002 ALLOTMENT TOTAL (Priority 1)	1	**28**	**24.75**	**12.37**	**12.38**
Bear Camp	BR 13	South Boundary Fence Reconstruction	Fence Reconstruction (1.75 mi.)	1	12	8.75	4.37	4.38
			FY 2002 ALLOTMENT TOTAL (Priority 1)	1	**12**	**8.75**	**4.37**	**4.38**
Blue Lake Cattle	BLC 9	Harvey Creek Spring Development/Fence	Water Developments (1)/FenceConst. (0.9 mi.)	1	6	6.5	3.25	3.25
Blue Lake Cattle	BLC 10	Admin. Water Tap/Trough	Water Development (1)	1	1	1	0.5	0.5
Blue Lake Cattle	BLC 18	Blue Lake Ranch Ditch Maintenance	Ditch Maintenance (Mechanical - 1.5 mi.))	1	10	1	0.5	0.5
Blue Lake Cattle	BLC 19	Blue Lake Ranch Livestock Bridges	Wooden Bridges (3)	1	3	3	1.5	1.5
			FY 2002 ALLOTMENT TOTAL (Priority 1)	1	**20**	**11.5**	**5.75**	**5.75**
Cedar Canyon	CC 3	Riparian Fence Reconstruction	Fence Reconstruction (2 mi.)	1	12	10	5	5
			FY 2002 ALLOTMENT TOTAL (Priority 1)	1	**12**	**10**	**5**	**5**
Davis Creek	DC14/BM13	Bald/Davis Boundary Fence (east)	Fence Construction (0.5 mi.)	1	3	2.5	1.25	1.25
Davis Creek	DC15/BM14	Plum Valley Boundary Fence/Cattleguard	Fence Construction (0.5 mi.)/Cattleguard (1/2)	1	3	6	3	3
			FY 2002 ALLOTMENT TOTAL (Priority 1)	1	**6**	**8.5**	**4.25**	**4.25**
Mt Bidwell	MB6a	Larry Flat Fence Reconst.	Fence Reconstruction (0.75 mi.)	1	5	1.5	0.75	0.75
Mt. Bidwell	MB 10	Bidwell Rx Burn	Rx Burn	1	246	49	0	49
			FY 2002 ALLOTMENT TOTAL (Priority 1)	1	**251**	**50.5**	**0.75**	**49.75**
West Valley	WV 4	Central Stock Ponds	Water Developments (2)	1	2	4	2	2
West Valley	WV 7	South Unit Division Fence	Fence Construction (2.5 mi.)	1	12	12.5	6.25	6.25
			FY 2002 ALLOTMENT TOTAL (Priority 1)	1	**14**	**16.5**	**8.25**	**8.25**
Yankee Jim	YJ 15	Fitzhugh Mahogany/Sage Burns	Rx Burn	1	227	46	0	46
			FY 2002 ALLOTMENT TOTAL (Priority 1)	1	**227**	**46**	**0**	**46**

STEWARDSHIP ALTERNATIVE
IMPLEMENTATION SCHEDULE

Allotment	ID #	Name of Project	Type of Project	Priority	Acres	Cost-M$	Permittee share M$	FS Share M$
FY 2003			**PRIORITY 1**					
Blue Lake Cattle	BLC 18	Blue Lake Ranch Ditch Maintenance	Ditch Maintenance (Mechanical - 1.5 mi.))	1	10	1	0.5	0.5
			FY 2003 ALLOTMENT TOTAL (Priority 1)	1	10	1	0.5	0.5
FY 2004			**PRIORITY 1**					
Blue Lake Cattle	BLC 18	Blue Lake Ranch Ditch Maintenance	Ditch Maintenance (Mechanical - 1.5 mi.))	1	10	1	0.5	0.5
			FY 2004 ALLOTMENT TOTAL (Priority 1)	1	10	1	0.5	0.5
FY 2001+			**PRIORITY 2**					
Bald Mountain	BM 4	Billy's Camp Fence Construction	Fence Construction (2 miles)	2	15	10	5	5
Bald Mountain	BM 6	Benton Meadow Fence	Fence Reconstruction (1.25 miles)	2	10	2	1	1
Bald Mountain	BM 7	Lake City Aspen Treatment	Conifer Removal/Burn/Construct Fence & Cattleguard	2	40	28	6	28
Bald Mountain	BM 8a	Cluster 4/Bald Mtn. Rx Sagebrush Burn	Rx Burn	2	289	56	0	56
Bald Mountain	BM 8b	Bald Mountain Water Developments (4)	Water Development (4)	2	2	8	4	4
Bald Mountain	BM 8c	West Side Water Development	Water Development (1)	2	0.5	2	1	1
Bald Mountain	BM 8d	Hall's Meadow Water Development	Water Development (1)	2	0.5	2	1	1
Bald Mountain	BMR 1	Holding Fields (4)	Fence Construction (3 miles)	2	80	15	7.5	7.5
Bald Mountain	BMR 2	Aspen Treatments	Conifer Removal/Burn	2	80	31	0	31
Bald Mountain	BMR 3	Gap Fences (3)	Fence Construction (1 mile)	2	6	5	2.5	2.5
Bear Camp	BR 9	S. Warner Rd. Aspen Treatments/Fence	Conifer Removal/Burn	2	200	84	0	84
Bear Camp	BR 12	Corporation Meadow Jack-pot Burning	Rx Burn	2	188	39	0	
Bear Camp	BR 14	Camp One Holding Field	Fence Construction (1.5 miles)	2	20	7.5	3.75	3.75
Bear Camp	BR 15	East Side Bitterbrush Treatment	Mechanical treatment	2	50	10	0	10
Bidwell	B-2	Bidwell Sheep Fence	Fence Reconstruction (1.5 miles)	2	4	4	2	2
Blue Lake Cattle	BLC 11	Clark's Valley Rd. Water Tank	Water Development (1)	2	5	5	2.5	2.5
Blue Lake Cattle	BLC 13	Allotment Cross Fences	Fence Construction (1.5 miles)	2	10	7.5	3.75	3.75
Blue Lake Cattle	BLC 16	Blue Lake Ranch Corral Repair	Fence Reconstruction (0.1 miles)	2	2	2	1	1
Blue Lake Cattle	BLC 17	Campground Fence	Fence Construction (1 mile)	2	5	5	2.5	2.5
Blue Lake Cattle	BR 9	S. Warner Rd. Aspen Treatments/Fence	Conifer Removal/Burn	2	190	50	0	50
Cedar Canyon	CC 5	Cedar Pass Fence/Painted Cattleguard	Fence Construction/Cattleguard (0.5 miles)	2	2	3	1.5	1.5
Cedar Canyon	CC 7	Aspen Treatments (debris fences)	Conifer Removal/Burn	2	50	23	0	23
Cedar Canyon	CC 8	Deep Creek Aspen Protection	Electric Fence Construction (2 miles)	2	100	2	1	1
Cedar Canyon	CC 10	Hwy 299 Juniper Removal	Juniper Removal	2	100	25	0	25
Cedar Canyon	CC 11	Stough Cattleguard Relocation	Cattleguard Installation (1)	2	2	7	3.5	3.5
Davis Creek	DC 10	Obsidian/Powley Aspen Treatment (4)	Conifer Removal/Burn (Opt. Fuelwood)	2	250	96	0	96
Davis Creek	DC 11	S.Obsidian Rx Brush Burn	Rx Burn	2	310	60	0	60
Davis Creek	DC 12	Plum Valley Bitterbrush Treatment	Rx Burn	2	219	44	0	44

STEWARDSHIP ALTERNATIVE
IMPLEMENTATION SCHEDULE

Allotment	ID #	Name of Project	Type of Project	Priority	Acres	Cost-M$	Permittee share M$	FS Share M$
Fandango	F1	East Side Spring Development	Spring Development (1)	2	0.5	2	1	1
Fandango	F 1a	Tamarack Flat Conifer Removal/Burn	Conifer Removal/Burn	2	125	48	0	48
Fandango	F 1b	Venning Cr. Sagebrush Rx Burns	Rx Burn	2	440	83	0	83
Fandango	F2	Fossett Spring Juniper Removal	Juniper Removal	2	3	0.75	0.37	0.38
Fandango	F2a	Fossett Spring Brush Removal (Road)	Brush Removal	2	5	1.25	0.62	0.63
Fandango	F3	North Side Water Development (Shinn)	Spring Development (1)	2	0.5	2	1	1
Fandango	F4	West Side Water Development	Spring Development (1)	2	0.5	2	1	1
Fandango	F5	Stock Pond Cleanout	Stock Pond Cleanout (2)	2	0.5	1	0.5	0.5
Fandango	F6	Prescribed Burn NE FandangoValley	Prescribed Burn	2	3656	463	0	463
Granger Canyon	GC 5	Pepperdine Aspen Treatments	Conifer Removal/Burn/Soil Disturbance	2	40	17	0	17
Granger Canyon	GC 6	Parker Creek Aspen Treatment	Conifer Removal/Burn/Fence (1 mile)	2	60	27	2	25
Henderson Meadow	HM 7	Cantrell Aspen Treatments	Conifer Removal/Burn/Fence (0.5 miles)	2	30	13	1	12
Henderson Meadow	HM 8	Cantrell Mill Drift Fence	Fence Construction (0.25 miles)	2	3	2.5	1.25	1.25
Lassen Creek	LC3	Cattle Guard and Fence N. Boundary	Cattleguard/Fence Construction (1 mile)	2	6	12	6	6
Lassen Creek	LC5	Owl Hoot Trail Water Development	Spring Development (1)	2	0.5	2	1	1
Lassen Creek	LC 7	Jensen Spring Development	Spring Development (1)	2	0.5	2	1	1
Mt Bidwell (Mill Cr)	MB5	Mill Creek Aspen Treatment	Conifer Removal/Burn	2	100	38	0	38
Mt Bidwell	MB6	Bench Trail Brushing	Brush Removal	2	3	0.75	0.37	0.38
Mt. Bidwell	MB 7	Wildland Fire Use Area	Appropriate Suppression Strategy	2	1892	17	0	17
Mt. Bidwell	MB 14	Schadler Fence & Cattleguard	Remove Fence & Relocate CG to Cottonwood Pass	2	4	7	3.5	3.5
Myrtle Creek	MC-2	Yellow Mtn. Meadow Rehabilitation	Conifer Removal	2	30	3	0	3
North Creek	NC 1	Cattleguard Cleanout/Temp. Gates (4)	Cattleguard Cleanout (4)	2	0	5	2.5	2.5
North Creek	NC 2	Plantation Thinning	Thinning	2	20	4	2	2
North Parker Creek	NP 3a	Fern Spring Reconstruction/Development	Spring Development (1)	2	0.5	2	1	1
North Parker Creek	NP 3b	Spring Developments (3)	Spring Developments (3)	2	2	6	3	3
North Parker Creek	NP 4	Willow Spring Sagebrush Burn	Rx Burn	2	108	25	0	25
North Parker Creek	NP 5	Dry Creek Basin Juniper Removal	Juniper Removal	2	20	4	2	2
North Parker Creek	NP 6	Dry Creek Basin Stock Trail Brushing	Brush Removal	2	25	6.25	3.12	3.13
North Parker Creek	NP 9	Fence Removal/Cattleguard Relocation	Cattleguard Installation (1)	2	2	7	3.5	3.5
Outlet	OU 5	Wildland Fire Use Area	Appropriate Suppression Strategy	2	4000	31	0	31
Parsnip	WV 6	Boundary Fence Reconstruction	Fence Reconstruction (0.5 miles)	2	5	4	2	2
Parsnip	OU 5	Wildland Fire Use Area	Appropriate Suppression Strategy	2	263	2	0	2
Thoms Creek	TC 2	Bolan Spring Sagebrush Burn	Rx Burn	2	85	21	0	21
West Valley	OU 5	Wildland Fire Use Area	Appropriate Suppression Strategy	2	4603	35	0	35
West Valley	WV 2	Juniper Treatment	Juniper Fall/Burn	2	1638	374	0	374
West Valley	WV 3	Stock Pond Cleanout	Stock Pond Cleanout (2)	2	2	2	1	1
West Valley	WV 6	Boundary Fence Reconstruction	Fence Reconstruction (0.5 miles)	2	5	4	2	2

STEWARDSHIP ALTERNATIVE
IMPLEMENTATION SCHEDULE

Allotment	ID #	Name of Project	Type of Project	Priority	Acres	Cost-M$	Permittee share M$	FS Share M$
Yankee Jim	YJ 12	Bowman Ranch Gap Fence	Fence Construction (1 mile)	2	5	5	2.5	2.5
Yankee Jim	YJ 13	Fitzhugh Spring Conifer Removal	Conifer Removal	2	5	1	0.5	0.5
Yankee Jim	YJ 18	Nelson Stock Pond Cleanout	Water Development Cleanout (1)	2	0.5	1	0.5	0.5
Yankee Jim	YJ 19	Nelson Fence Construction	Fence Construction (0.5 miles)	2	3	2.5	1.25	1.25
Yankee Jim	YJ 20	Gate Relocation (West Boundary)	Gate Relocation (1)	2	0.5	0.5	0.25	0.25

Appendix F

BALD MOUNTAIN PERMITTEE ALTERNATIVE

Bald Mountain Alternative DRAFT of 2/11/00

INTRODUCTION

The ranching business in Modoc is not an easy business, however it is a rewarding endevor in that the rancher is in the business of helping nature in the creation of new wealth. Through his livestock, the rancher is able to take advantage of the energy that comes from the sun. This energy flows from the sun to the green plants ; grasses, forbs , and brush . As the livestock range over the land, they harvest a variety of these plants . In the process of harvesting the animal hastens the break down of the plants, enriching the soil as they pass over and fertilize the land. Grazing livestock produce eatable protine for other animales to eat. In decomposition they aid the micro orginisms and plants to continue the carbon ,nitrogen , & mineral cycles. It is this energy flow that has transformed our earth from a baren mineral mass to its persent state with a balance of clean air , water , and plant communities aides by the carbon mix near the surface that foster a desierable environment for humans also.

The understanding that plants and their relitive health is what feed our livestock and the public's wildlife and is also the driving force behind this alternative . The complexities of this allotment require site specific managment to maintain or enhance the biodiversity already that exists. We have attempt to adress managment of the diverse situations that exist on the allotment by setting our large goals and then setting our site specific objectives. Our objectives are orchestrated through our planned projects , actions , operations , and on the ground decisions that will move us tward our goals.

Riparian issues seem to be driving the agenda for range managment decisions of today , however , because of the diverseity of the Bald Mountain Allotment and the fact that less than 2% of the allotment is ripariain , we need a managment plan that will deal with the health of the other 98 % of the allotment. Our alternative will deal with riparian problems on a site specific basis through our " Analsis Thought Process Work Sheets " which clarify our objectives . Our monitoing plan is included in each objective worksheet under the how to measure section and a statment addressing who , what , when , where , why , and how will be included as recomended by the National Experimental Stewardship Commitee Report of 1990. It is our site specific approach to managment which is backed by good science that should make this alternitive the preferred alernative for the Bald Mountain Allotment .

Reference: see ESP Progress Report 1979 - 1990 p. 13
also objective worksheet (ie ANALSIS THOUGHT PROCESS WORK SHEET)

/

GOALS AND PRINCIPALS OF MANAGMENT

1. To have most of the allotment in Proper Functioning Condition .
2. To Achieve Desired Condition in identified places with a statment of what the Desired Condition is for.(ie. wildlife , clean water , forage , willows etc.)
3. To produce forage for permitted livestock on a consistent and sustainable basis .
4. To identify poblems as soon as possible and agree on managment solutions that will move the problem tward the solution.
5. To manage for the good of " the whole " with the realization we cannot acheive for every resourse to the maximum on every acre. There must be balanced trade-offs.
6. To gain production from the allotment by promoting ecosystem health cycles (ie. mineral cycle , carbon cycle , water cycle , nitrogen cycle , energy flow etc.)
7. To produce clean cool water on the allotment.

PROJECTS

1. All projects identified in the WMRP - under BM & DC (see Apendix A)
2. Additional Identified projects...(see Apendx B)
3. Future adaptive managment projrcts as identified by the USFS , Public , or Permittees.

BOUNDRY CHANGES

1. East of Stough Camp ground - move and rebuild existing fence to the east side of spring identified as a concern on Cedar Canyon Allotment(sec. 27) and develop a water trough on the Bald Mountain side . Exact location of the fence to be determend on the ground by the Forest Service & Permittees early in the grazing season 2000.

2. Thoms Creek the present boundry as it exists , (& as agreed upon by Betty Brown , K.C. Bordwell , and Ray Page in the summer of 1999), is not a boundry that cattle will adhere to because it runs down the middle of a watershed in a basin common to both allotments. If in fact drift within the Joseph Creek Basin is unacceptable by the Forest Service , then a logical fence location needs to be sought. When considering the whole of both allotments this is probabaly low on the list of solvable problems.

3. It is the intention of the Bald Mountain Permittees and the remaning Davis Creek Permittee to buy the Gardner portion of the Davis Creek Allotment . Assuming this transaction occurs the following boundry changes will occur.

(A). The Davis Creek/Bald Mountain Allotment boundry will officially be placed at the cattle guard and short

fence on the Halls Meadow/Plumb Valley Camp Ground road as proposed in the WMRP as DC 15 .

(B) On the southeast side of Davis Creek Allotment the official boundary between Bald Mountain and Davis Creek will be placed along the old drift fence at the head of Wilkerson Canyon , and back to the north side of Benton Meadows. (see discussion of fencing under projects).

CATTLE ALTERNATIVE

In this alternative we will run the same number of cattle on Bald Mountain as present. However we plan to purchase part of the Davis Creek Allotment which will have the capacity to run an additional 42 head of cattle. Through a minor allotment boundary adjustment with the Cedar Canyon Allotment we will gain a small amount of ground , however we do not anticipate any additional cattle numbers from this adjustment as it is to solve an existing drift problem .

This alternative will include rest, some rotation and distribution of cattle that will maintain riparian areas in proper functioning condition while moving identified areas toward desired condition . Adaptive management will be advanced through the experience of the Forest Service Range Technician and the Permittees . A worksheet will be made for each project or problem identified . The worksheets will become the stated objectives for the alternative and Bald Mountain Allotmnent Management Plan . Each objective will state site specifically ; who , what, when , where , why and how of monitoring or measurment.

Turn out:

There will be two turn out fields on the west side of the allotmenmt; 1. The lower west side unit now in existence 2. The Franklin Unit to be created .

Cattle will be trailed up Lake City Canyon , held in the forks of road field over night and trailed to one of the west side units the following day. The new Franklin unit will give us options in the spring to go to this second pasture or to the outside . This decision will be made depending on the situation that exists each grazing season.

There are five turn out areas on the east side of the mountain. They vary in the number of cattle that should be turned out in each because of plant comumnities , size, and topography. They are not fields , but canyons at lower elevations with gap fences at strategic points to prevent movement of cattle to the highlands .

East side turn out areas:

1) Mc Cully - Pine Creek/ Cooks Canyon unit.

2) Soldier Creek lower .
3) Daniels/Simpson
4) Releford .
5) Clover Creek / Wilkerson

The Bald Mt. Plan has discussed management during the early part of the grazing season in previous paragraphs . However the allotment is not run as a season long allotment. The high lands on the allotment lend themselves to a different set of management needs than do the areas at lower elevations. The general plan for management after leaving the early units will be to scatter the cattle in small bunches , by using salt and other means. Identified riparian areas of concern will be managed as per its objective statement. In general riparian use will be observed and some cattle may be moved to enclosed pastueres if they become a problem. Future identified objective on the highlands will be addressed by adaptive management and within the annual operating plan. It is anticipated the added control of cattle we derive from the proposed projects in the lower country will improve management during the later summerin the high country .

Joesph Creek Pastures will be utlized as late summer and fall pastures. It is anticipated that we will be placing cattle that cause concentration problems on riparian areas in other parts of the allotment during the summer in these fields. The remaining forage will be used in the fall to acceptable levels as identified in our objective statement.

Rest:

Where as we will have two turn-out fields on the west side it will give us the option of resting one , using both , or resting some of the turn-out canyons on the eastside or several other options that may arise from future problem identifications or adaptive management.

The Cinder Field if created , will have the ability to be used in 3 ways ; 1. It could be used as an alternate early turn out field . 2. It could be used as a summer field or 3. It could be used as a fall pasture. When in place it should give us several options for management that will aid management in other areas of concern.

Gathering Plan:

We will open the gates to the Joseph Creek Pasture after grasses have set seed and cattle have begun concentating on riparian areas in other parts of the allotment . Cattle found concentrating on riparian areas will be moved to the Joseph Creek Pasture and locked in one of the fields.

Benton Meadows will be used in a similar manner as Joseph Creek pasture.

Small gathering pens will be situated through out the allotment in strategic locations for fall gathering or summer riparian management. These small fields will be large enough to hold animals a day or two . In summer cattle that are habitually found in the wrong place can be penned and later removed and placed in another area . Because of the California Deer Hunting Season the cattle are usually disturbed and stired up in mid August. Bow hunters crisscross the allotmewnt causing the cattle to begin to drift home . This general migration tward the home ranch slows when the bow season is over , however this creats an un-planned gather, but it is a FACT of multiple use that has an affect on the opperation on this allotment. It is proposeed that an equal number of cattle aum's be secured on the allotment after the regular deer season.

In the fall when the pasture is used to proper level in the Joseph Creek Field the cattle will be taken over the top and down Lake City Canyon. Lake City Canyon will not be used as a grazing area , but will be used to take cattle over the mountain in the spring and as a return path in the fall.

CATTLE and SHEEP/GOAT ALTERNATIVE

This alternative would add a band of 1000 sheep to the allotment and 50 cattle would be dropped from Bald Mountain permitted numbers. It is generaly accepted that the grazing capacity of a combination of cattle and sheep is greater than for cattle alone . There are two major reasons for this , as follows ; 1) Sheep can be herded onto areas not favored by cattle and 2) Sheep select , for grazing , some plants not generally favored by cattle or at least select less often.
Bald Mountain has a number of areas used very little by cattle that could be grazed very well by sheep. Sheep will also make more use of sagebrush than cattle do in the allotment. Forbes comsumption would also increase to some degree.

Reference: Esmail 1991 .

With proper timing of sheep grazing , it may be possible to shift some of the plant communities from the present dominant stands of sagebrush to lesser amounts of sagebrush and more grasses and forbes. Because sagebrush variety growing on the Bald Mountain Allotment may not be preferred by sheep this may not work. However, many local sheep eat considrable amounts of sage brush during certain stages of growth.

Reference: Lacock 1964 .
Welch 1987 .

It is generally accepted that five sheep equal one cow in forage consumption . The Bald Mountain Allotment Alternative suggests a trade off of 50 cattle for 250 sheep as far as forage comsumption is concerned. The alternative considers that the other 750 sheep to make up a band will derive their forage from forage areas not used by cattle and forage plants not favored by cattle within the allotment and from forage areas outside of the allotment . Areas outside the allotment would be Cedar Canyon and Davis Creek or other places needing vegetative manipulation .

Monitoring ;

Monitoring is a funtion of management , however arbitrary blanket standards an guides for monitoring as proposed in the Warner Mountain Rangeland Project are to address general management of administration as would be found on catagory C allotments. The Modoc Forest Plan has designated Bald Mountain Allotment as a catagory D allotment therefor we need to use a higher level of planning and managment. The Bald Mountain Plan will adress monitoring site specifically for each objective worksheet .

Reference:
Modoc National Forest Land and Resource Management Plan 1991. see Appendix O and see p 4-152 through 4- 159
Objective worksheet example appendix Z

The Bald Mountain Monitoring Plan will be as follows:
Long term trend monitoring will be done by The Forest Service , the Permittee and a third party or other intrested public . Short term monitoring will be done to satisfy the measurment statement in the objective work sheets. This will be done as outlined in the objective worksheet.

Streams:

On Rodgsen type C and D stream 4 " of stubble height will be left on the creek at the end of the season to trap sediment, however if areas of greater utilization are found repeatedly , adaptive management will be used rather than livestock reduction as a means to solve the problem. The problem will be identified and may be stated in an objective worksheet and become an objective under the goals we have set for management on the allotment.

There are different ways of monitoring and differnt levels of monitoring for the same condition . Generally

there is short term monitoring which measures the accomplishment of an action that is assumed will accomplish an objective and long term monitoring which measure if the objective is being accomplished .

Reference :
Clary 1996.
Dodd 1992.
Larson 1996.

Like the Bald Mountain Permittees , some people in the field of range management have major problems with utilization standards being the major tool for management of range . They look at utilization as being just one of several tools.

Reference:
Burkhart 1997.
Dodd 1992.
Frost 1994.
McKinney 1997
Sharp 1994.

If all forage plants were the same as to palatability , on flat country and close to water then utilization would be a much better tool for management . However , this is seldom the case especially in the Bald Mountain Allotment because variations in topography , plant communities and elevation. Differential grazing has been a major problem for range managers since the start of range science.

Reference:
Burkhadt 1997.
Clary 1990
Cook 1953.
Cruz 1994.
Echert 1986.
Ganskapp 1988.
Hormay 1970.
Sharp 1994.
Welch 1987.

Even (Holecheck 1987) who is a great fan of the use of utilization standards recognizes the need for flexibility in the use of such standards. (see Holecheck 1987 page 17)

Cattle are selective grazers. They select by area , by species of plants , by individual plants of the same species and by stage of growth and maturity of plants. Selection by plant is referred to as palatability. Relative palatability between plants often shifts as the growing season progresses. This also may shift when percipitation is received during the year.

Because of the wide difference of palatability , which generally exists in multispecies vegetation , cattle often

graze one selection to the ground while grazing another only slightly and leaving another untouched . This is generally compounded when the regrowth occurs. In this manner the most palatable plants are put at a disavantage in compitition with less palatable plants.

It is possible to eliminate certin palatable plants or greatley reduce production from such plants even with low (average) utlization levels. Higher (average) use levels may in fact put the more palatable plants on more equal competition footing with less palatable plants.

All forage plants are in competition with those plants seldom or never used as forage. Since photosyntheic tissue (green growing leavs or stems) is not consumed from nonforage plants they have a competitive advantage . Such nonforage species as juniper and to a lesser extent sagebrush and skunk cabbage fall into this category. Cattle grazing generally has little direct effect on these species.

Forage plants are more tolerant of grazing at certin times of the year. This makes it possible to develop grazing straregies that allow for heavier use at certin times and to graze light or rest at other times.

Reference:

Angell 1994.
Clary 1990.
Cook 1953.
Eckert 1986.

Utilization standards in the Warner Mountain Project are actions to accomplish objectives over time . The assumption is that by grazing only to these levels , certin objectives will be reached . The standards are applied project wide. Long term monitoring will then follow.

The Bald Mountain Allotment Alternative differs in that it would be less dependent on short term monitoring (ie utilazation standards) and go direct to monitoring the desiered goals such as water temprature and turbitity . If determined objectives are not met at the persent time then actions would be designed to work toward reaching that objective in a certin timeframe.

Some view utilization standards as an aid to administration as a policing tool rather than a resourse managment tool.

Reference:

Burkhart 1997.
Dodd 1992.
Frost 1994.
McKinne 1997.
Sharp 1994.

SUMMARY

Properly managed livestock on a range will add to the biodiversity of that range. The grazing animal incorperates plant material into the soil , enriching it by breaking down the structure and incorperating it into the soil. This organic addition to the soil aids the soil in retaining water. Many plants, if left standing , oxidize releasing carbon dioxide in to the air adding to the so called green house gasses. Water in the soil picks up minerals which in turn cycles back to the plants. The plants cycle nitrogen though the soil and to the micro-orginisams in the soil which break the vegetative matter down further. The plants use the nutrients , water , carbon dioxide and sunlight to produce more plant matter to be broken down and continue the cycle again . In the process of photosynthsis the plant uses the carbon from carbon dioxide in the air to make sugar, and oxygen is released purifing the air in the process. The interaction of the large animanls with the plants is an often missed fact of biology and is especially important in an area such as ours, where the moisture is seasonable. Capturing the suns energy for profit and building the soil are goals that should be equal to enhancing riparian areas.

The riparian areas are less fragile than the suronding upands , however their importance to wildlife and clean water should not be overlooked . An occasional clean up or mow job usually invigorates riparian areas also.

Healthy plant comunities is a goal in our Bald Mountain alternitive and will be achieved by the managment of the whole allotment . The riparian areas will be managed for a stated objective on site specific basis. The 98% in the remainder of this diverse allotment will also be managed on a site specific basis. As stated in our goals, we have formed this plan to atain proper funtioning condition in most of the allotment , desierd condition on identified parts of the allotment , economic situations that will allow us to continue a profitable livestock opperatin , provide wildife habatat , clean air and clean cool water for the public.

We have taken the projects sugested by the WMRP - TRT, and added a few more. We have come up with some boundry adjustments that should solve some concerns , however several boundary problems still exist.

We feel that with the proposed improvements we will our achieve stated goals and the desires of most of the public at large. It is with great optimism that the Bald Mountian Permittees , with the help of our Profesional Range Consultant , present this alternative plan that will guide our management toward stated goals and objectives over the next several years.

ANALYSIS [THROUGHT PROCESS] WORK SHEET

PRESENT SITUATION OR CONDITION:

DESIRED SITUATION ORCONDITION:

RATIONALE FOR DESIRED SITUATION OR CONDITION:

TIME FRAME TO REACH DESIRED SITUATION OR CONDITION:

ACTION OR ACTIONS TO REACH DESIRED SITUATION OR CONDITION:

RATIONALE FOR ACTION OR ACTIONS:

HOW RESULTS WILL BE MEASURED:

WHAT FOLLOW –UP ACTIONS WILL BE TAKEN

NOTES [continue on back as needed]

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The following references have some value in analyzing the Bald Mountain Allotment Alternative.

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An excellent reference about utilization is:

Station Bulletin 682
May 1998
Stubble Height and Utilization Measurements :Uses and Misuses
Agricultural Experimental Station
Oregon State University
Corvallis,OR 97331-2119

Appendix G

PUBLIC WORKSHOP QUESTIONS AND RESPONSES
February 16, 1999
Warner Mountain Rangeland Project

1. **What do *you* want to see come out of this planning effort, and why?**

North Zone: - A management plan that is workable and helps all parties involved. Concerns of riparian areas seem to be the main focus
A) Resting
B) Alternate water sources, to get cattle off of riparian areas
C) Fences or fencing
D) Rotational grazing
- How can we get started on improvement project discussed when the TRT met 2 years ago.
- Allotment improvement, brush removal, ways to remove brush.
- Change timber sites to be opened up for grazing to release pressure on riparian areas, rotation in times of grazing, ways to control drift, elk are grazing on all areas at all times including riparian areas.
- Need to be flexible in long range plans, not locked into a restrictive plan.
- A plan that as cattlemen we can live with, a plan that is going to last over 5 years, management decision based on on-the ground experience and not from office/book.
- That we get this settled and keep doing the same thing.
- Riparian stream flow max. and min. control, weed abatement control, erosion control.
- Does the Forest Service have a policy re: its role in national forest permitted livestock drifting into adjacent private land and effecting riparian and meadow systems and water quality? What does collaboration mean?
- Make a plan that will last >5 years.
- Can we ever get this planning done?
- How soon can we implement things we plan?
- Where will $ come from?
- Erosion/land moving into lake-72 cuft./sec. - 2.5 cuft.
- Flexibility built into plan- take opportunities. egs. burning/thining
- Interaction on private lands/permittees/USFS. Who controls what?
- Private lands @ USFS or other boundary.
- Open range county-livestock drift onto private. What can be done?
- SNF- indicates $ will come.
- Mgmt. decisions made on common sense/local knowledge, not theories.
- $ will be competitive, how to prioritize work & funding.
- Partnership $.

North Central Zone:

- To see a workable AMP, one that does not increase burden on the permittee, possibly even reward permittee for management practices.
- Secure permit that can be counted on over the years and have dependable season of use.
- Following through with decisions made.

South Central Zone:

- Inmate labor-thinning, control burn line construction, better cost savings to taxpayers.
- Controlled burns, seeding after thinning projects, juniper thinning, road and stock trails maintained.
- Controlled burns(sagebrush, fir, junipers) for range improvements, additional stock water sites of stream, more fir thicket logging, seeding after logging.

South Zone:

- Timber harvest and management, increased livestock grazing.
- Continued use of AU natural resources on Warner Mtns. By any and all public that would like to be included. Also a long term plan that doesn't change when somebody feels they think it should.
- A stable grazing base that we can depend on year after year. Work on range improvement instead of AUM's reductions, try work in more prescribed fire for added forage and forbs.

General:

- Completed AMP's.
- I want to see the "multiple use" concept remain intact, I want to see an overall improvement in the management of these allotments brought about by all forms of vegetation management-why? because it is very important to our county's economic stability.
- Return the Range(Mtns) to a multi use zone, economically and environmentally
  A. Econ: - Ag uses (ie. grazing) increased with increased foraging.
  - Recreation trail improved (education on ecosystems to tourists
  - Timber uses
  B. Environ: - Healthy Econ=Healthy forest.

2. **What do *you* not want to see come out of this planning effort, and why?**

North Zone:

- Don't steam roll us, give us some say.
- Doubts (local management from San Francisco or Washington) one size fits all management.
- Don't want our permit cut in AUM's, all improvement cost put on the permittee, all local decisions in conjunction with permittee, don't want continued protection of predators such as cougars and coyotes, do want management plans on individual allotments.
- Don't want plan to cut grazing numbers, threaten viability of permit, want decisions made locally-not from Washington, more personal approach to

management decisions-what works for one area might not work in another.
- Local decisions, local management, no size fits all.
- Do not make policy decisions w/o thinking about adjacent private land effects- ie. don't dump the results of national forest permitted cattle drift onto private land on the open range law and wash your hands of the problem.
-Increased costs.
-Fence maintenance, shorter seasons/less cows/sheep.
- Don't make decisions at San Francisco or Wash.DC.
- Local decision making strongly preferred
- Site specific mgmt.
- No one size fits all, eg. Tahoe/Modoc different.
-All change cannot happen overnight- may take time.
- USFS should/must consider private effects on adjacent lands.
- Does grouping make sense?
- Might still be too large in some cases-eg. N. Warners.
- Most comfortable working on land we know best. Land base make sense.

North Central Zone:
- Reduction in AUM. A management plan that won't work on the ground.
- The same management practices that Cal-Trans has been allowed to do with deposits adjacent in riparian area.
- More harassment by FS and general public, no reduction in numbers, a management plan that won't work.

South Central Zone:
- No reduction in AUM's, no increase in recreation, no lack of controlled burn, no lack of road maintenance.
- No reductions in AUM's, no less logging.

South Zone:
- Planning with no effect.
- I don't want this plan to be used against us when it is final.
- All our efforts (permittees) plans not being used in this plan.
- A reduction in AUM's, things that permittees come live or work with.

General:
- I don't want to see plans or management unfold that I as a cattleman can't live with. If it is such that "they" don't want us out there, take our permits away. Why, because we are an important and stable part of this community.
- I applaud the streamlined process- I do not want to see the process get bogged down; at the same time I do not want to see any user "steam rolled" over.
- Control of permittees taken away and never returned under guise of a restricted use of allotment for its improvement. Why, to date, permittees cut backs have never been returned to the increase of foraging.

3. **Do *you* think this land base grouping for landscape analysis makes sense, and why?**

North Zone: no responses
North Central Zone:
- yes
- yes
- OK

South Central Zone:
- Will this grouping have an order of priority?

South Zone:
- It's close
- No, allotment by allotment is better
- Being able to get it over and done with
- No, just make a plan and stick with it. Take a stand and go with it. We are currently under a 10 year plan on about the 4th year and now it is being challenged. Also we need to get out on the allotments and do the work.
- On certain things I do! But referring back to answer 2 I still don't want it used against us on the Warners.

General:
- Good
-Yes, because it fits geographically
- I am in agreement as outlined

4. **List the 3 to 5 most important issues relating to range management on this land base. Briefly tell why the issue is important to you.**

North Zone:
- Cut in allotments should be reinstated before surplus feed is allocated to other species. Better management between allotments with different turnout dates. Changing from a strictly timber management to a more diversified use. Forest Service should be responsible for half the cost of fences between private lands and government lands.
- Encroachment of undesirable SSP (juniper, false hellbore, sagebrush). Recreation caused problems, erosion in campgrounds, erosion in obsidian mines. Loss of desireable SSP (bitterbrush, aspen). Loss/decline of deer.
- Wildlife intrusion in non historic areas. Habitat management for "potential" species.
- The Myrtle Creek Allotment management plan should be designed so as to prevent National forest permitted livestock from drifting onto our private land and adversely effecting water quality, riparian areas and meadow ecosystems. I have ideas on the specifics.
- Fences, Fire, Trespass cattle private fencing a terrible problem, Elk to many, reconstruct campgrounds.
-Riparian area management and actual viability of it. Endangered species issues and their impact on allotments. Tree management. Alternative water sources to take pressure off of riparian areas. Fences or fencing to take pressure off of

riparian areas. Rotational grazing plans to take pressure off of riparian areas. Affects of encroachment by recreationists of riparian areas, erosion, mining for obsidian, 4 wheeling, etc.

North Central Zone:

- Cal Trans dumping of excess rock. Juniper encroachment, lack of water and feed. Too many stands of White Fir, dense canopy no feed. Interference of 299 traffic liability to me.
- Riparian very important to others and the esthetic value is important to me. Fences good as control in some instances, but? To use the feed that is there. USFS is under used.
- Develop upland. Don not need border! Having my permit for years to come. Having a workable AMP. Forage. Incentive for good management practices. Having a good AMP in place to protect allotment. Dead and dying trees.
- Develop upland forage, get rid juniper, white fir, water developments, effective fences/riding.
- Decisions that are durable and will ensure permit availability for a reasonable time period.
- Qualified personnel to inspect permits.
- Workable AMPs.
- Possibility of sheep allotments.
- Boundary disputes.

South Central Zone:

- Due to years of no new range improvements cattle are attracted to riparian. Key or priority areas once grazing is reduced they are forgotten and new areas are selected. $$ should be coming from USFS for off stream water development. More fir stand thinning would help attract cattle away from riparian. More burning would help greatly.
- Basic lack of range improvements, non-structural (vegetative improvements), seeding under timber activity.
- Upland water developments to improve riparian condition.
- Key areas, changing designated key areas when improvement is accomplished, always finding new "sore spot" which get attention.
- Burning and fir stand thinning to draw cattle out of riparian areas. Juniper are high priority.
- Site specific issues need site specific planning.
- Maintain existing road system, recognize right of ways.
- Monitoring points should be located away from roads and crossings.
- Address why permits have been given up or are no longer usable due to harassment(internal and external) and economics.
- Permits should be analyze w/respect to the role they play in the permittees complete operation (economic feasibility).
- All decisions need to consider economic impact to county, maintain county tax-base, local economy, business, roads, etc....
- Fence/improvement maintenance: use of coop. agreements to use other groups ie.CDC. Wording in FS documents to allow for use of other work crews.
- Funding!! For all this where will it come from?
- Groups who don't participate early and often should not have power to interfere

With decision at the end.

South Zone:

- Timber harvest management.
- Getting some burning to create more feed for cattle.
- Cleaning up the downfall in the timber. If you would it would make more feed for The cattle. You wouldn't get as much pressure on riparian areas.
- Maybe getting new fencing on the south end of Alaska so we wouldn't get drifting occurring.
- Prescribed fire (juniper), fence maintenance, control of off road vehicle.
- Range improvements by logging, fire grazing etc. Just do the real work.
- Replace old fences.
- Timber harvesting to promote forage and stock trails.
- Control damage from off road vehicles.
- Boundary fence needs to be fixed. maintained by FS not permittee.
- Use prescribed fire and wildfire to improve forage.
- Use fire in juniper country.
- Cooperation/FS/permittee in the management guidelines.
- Develop uplands through improve management (water, fences, juniper) to take pressure off riparian areas.
- FS should help financially and share costs with permittees to accomplish management goals and objectives, ie. grant funding. We need to know if we can fund what we design. Target funds that are available.
- To develop a workable plan for all.
- Will we be able to fund it?
- Collaborate with all groups throughout the process. It's unfair to the persons involved from the beginning to the end to have another user group come in and derail the process at the end.

General:

- Cooperation of permittee and FS in implementing a workable (make sense) plan. Improve upland to take pressure off of riparian areas. Funding projects: FS/permittee working to obtain $$.
- Too many junipers- closing canopy/
- Additional treatment of forested/shrub needed.
- Elk moving into non-historic range- assign effects to elk.
- Management for single/unknown species-eg. willow flycatchers, redband trout, etc. potential species.
- Recreation effects- campground erosion, obsidian.
- OHV use effects.
- H2O access for livestock/wildlife.
- Road effects-livestock access.
- Kill noxious weeds.
- Deer decline.
- Focus on issues we can change/effect.

Appendix H

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Appendix I

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Williams, Terry	Modoc County Board of Supervisors, Steering Committee Chairperson
Young, Desna	Nevada Environmental Representative

WARNER MOUNTAIN TERM GRAZING PERMITTEES AND OTHER WMRP REPRESENTATIVES (Permittees as of July 2000)

Allotment	Permittee	Representative
Bald Mountain	Jorgensen, Fred and Toni	
Bald Mountain	Page, Raymond and Peggy	
Bear Camp	Eagle Creek Ranch Company	Dick Mecham and Travis Bachman
Bear Camp	Metzker, John	Tony Frutoza
Bidwell	Bunyard, Michael	
Blue Lake	McGarva Ranch	Ken and Shane McGarva
Blue Lake Sheep	Cook, Wesley	
Buck Creek	Cloud, Carrol	Amy Cloud
Buck Creek	Hutchison, John and Linda	
Cedar Canyon	Quigley, Gae	
Coyote Allotment	Jess Valley Land & Cattle Co.	Rodney Flournoy
Davis Creek	Page, Raymond and Peggy	
Davis Creek	Wofford, Michael and Emily	
Emerson-Cottonwood	Miura, Marcel	
Emerson-Cottonwood	White Pine Lumber Company	Tom Picotte
Fandango	Hutchison, John and Linda	
Granger	Weber, Andrew	
Henderson Meadow	Flournoy, Rodney	
Henderson Meadow	Jess Valley Land & Cattle Co.	Rodney Flournoy
Joseph Creek	Foster, John Estate of	Andrew Foster
Lassen Creek	Hapgood, Norma	
Mount Bidwell	Bunyard, Michael	
Mount Bidwell	Peterson Ranch	Doug Bucher
Mount Bidwell	Sartain, Jerry	
Myrtle Creek	Cloud, Carrol	Amy Cloud
Myrtle Creek	Lawson Ranch, Inc.	Eugene Lawson
North Creek	Eagle Creek Ranch Company	Dick Mecham and Travis Bachman
North Parker Creek	Bailey, Clifford and Lois	
North Parker Creek	Weber, Warren	
North Parker Creek	Martinez, Timothy and Terri	
Outlet	Jess Valley Land & Cattle Co.	Rodney Flournoy
Parsnip	Roxann Van Loan 1997 Trust	Billy Flournoy
Selic	Cook, Wesley	
Thoms Creek	Brown Family 1991 Trust	Betty Brown
Thoms Creek	Prock, William and Mary Ann	
West Valley	McGarva Ranch	Ken and Shane McGarva
West Valley	Roxanne Van Loan 1997 Trust	Billy Flournoy
Wilderness Sheep (Cottonwood/Owl, Eagle/Barber, and Mill/Eagle)	John Espil Sheep Co., Inc.	John Espil
Yankee Jim	Nelson, Stephen, Linda, Allan, Claudia	Stephen Nelson

WARNER MOUNTAIN TERM GRAZING PERMITTEES AND OTHER WMRP REPRESENTATIVES (continued)

Allotment	Permittee	Representative
Yankee Jim	Weber, Andrew	
Yankee Jim	Weber, Warren	
Yankee Jim	Wilson, William	
Yankee Jim	William Robert Wilson Family Trust	William Wilson

FORMER PERMITTEES AND OTHER ALLOTMENT REPRESENTATIVES WHO PARTICIPATED IN THE WMRP

Allotment	Permittee	Representative
Davis Creek	Gardner, Clarke	Reed Gardner
Cedar Canyon	Hussa Ranch	John Hussa
Wilderness Sheep (Cottonwood/Owl, Eagle/Barber, and Mill/Eagle)	John Espil Sheep Co., Inc.	Tom Espil

MODOC COUNTY GOVERNMENT: COOPERATING AGENCY FOR ECONOMIC ANALYSIS

Modoc County Board of Supervisors

Cantrall, Pat	District 3, Former Chairperson
Colt, Joe	District 2
Huffman, Nancy	District 5, Chairperson
McIntyre, Ron	District 4
Williams, Terry	District 1

Modoc County Land-Use Committee

Beeson, Dwight	Buckingham, Keith	Byrne, Geri
Carey, Carolyn	Comisky, Hugh	Craig, Delbert
Curtis, Sean, Chairperson	Dick, Gordon	Erkiaga, Janie
Harris, Joe	Heiney, Wilma	Huffman, Nancy
Kessler, Scott	Macy, Marty	Maddalena, Todd
Madison, Bill	Malby, Glenn	McGarva, Duane
Nelson, Al	Page, Ray	Roberts, June
Setzer, George	Sues, Monte	

MODOC COUNTY GOVERNMENT (continued)

Modoc County Cooperating Agency Economic Analysis Sub-Committee

Curtis, Sean
Delmas, Rick
Page, Ray
Roberts, June

OTHER ORGANIZATIONAL PARTICIPATION

Cleary, Rex	Resource Concepts, Inc.	Principal
Haines, Kyle	Klamath Forest Alliance	Representative
Henson, Ryan	California Wilderness Coalition	Conservation Associate
Roberson, Emily	California Native Plant Society	Senior Land Management Analyst
Worf, Bill	Wilderness Watch	President

OTHER INDIVIDUAL PARTICIPATION

Cockrell, Will
Compilli, Joe
Clemons, Bob
Giffen, Craig
McCulley, Robert
Schluter, Bob
Steger, Don
Sandy Stevenson

TRIBAL GOVERNMENT CONSULTATION

Pit River Tribe

Brown, Arlie	Kosealekte Band Alternate
Cantrell, Lawrence	Tribal Chairman
Cardenas, Daniel	Hammawi Band Alternate
DeGarmo, Delores	Kosealekte Band Head
Forest, Erin	Hewisedawi Band Head
LeBeau, Michelle	Hammawi Band Head
Preston, Ginger	Astarawi Band Head
Preston, Mary	Atwamsini Band Alternate
Preston, Wally	Atwamsini Band Head
Snow, Patricia	Astarawi Band Alternate
Wilkes, Arnold	Vice Chairman

TRIBAL GOVERNMENT CONSULTATION (continued)

California Indian Basketweavers Association	
Greenfelter, Sara	Director
Cedarville Rancheria	
Fraqua, Marisha	Tribal Chairperson
Fort Bidwell Indian Community Council	
Abinanti, Joe	Tribal Manager
CalfLooking, Pat	Former Tribal Manager
Pollard, Denise	Tribal chairperson

COMMENTORS ON PROPOSED ACTION (SCOPING)

Ballard, Nancy
Cardosa, Albert
Cloud, Amy and Carroll
Giffen, Craig
Grams, Gaylord
Guenther, Keith
Hammawi Band-Pit River Tribe
Hapgood, Norma
Johnson, Dwight
Jorgensen, Fred
Lake, Thomas
McGarva, Ken
McGarva, Shane
Miller, Mary Jo and Bob
Mills, John
Modoc County Board of Supervisors
Modoc County Cattlemen's Association
Modoc County Farm Bureau
Morphis, Huel
Page, Raymond
Stradley, Audrey
Warner Mountain Permittee Association
Wilderness Watch

Appendix J

RESPONSES TO COMMENTS ON THE Warner Mountain Rangeland Project Environmental Assessment

To be prepared pursuant to public comment period on the *Warner Mountain Rangeland Project Environmental Assessment.*